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This is an alphabetical index of articles and discussions arranged by leading words. It contains occasional cross references. Names of authors and men who discussed the papers are also included. Details of society proceedings, including the names

of papers read, officers elected, etc., can be located in the proceedings under Societies. Editorials, News of the State, Marriages, Deaths, Public Health items are classified under these headings. The subjects of editorials also appear alphabetically and are marked (E).

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GROUP DIAGNOSIS AND GROUP THERAPY*

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GROUP WORK AS A PHASE OF PROGRESS

You have invited me to speak to you upon some phase of the progress of clinical medicine. Present day workers in this subject, impressed by the rapidity of change in the conditions under which they work and by the breakneck speed with which advances have lately been made, find it hard to believe that the idea of human progress could be challenged or that the very idea itself is of recent date. Professor Bury has, however, in a contemporary volume¹ shown very clearly that it was not until the seventies and eighties of the last century that the idea of Progress became at all general as an article of faith among educated people, some holding it "in the fatalistic form that humanity moves in a desirable direction, whatever men do or may leave undone," others believing "that the future will depend largely on our own conscious efforts, but that there is nothing in the nature of things to disappoint the prospect of steady and indefinite advance." The idea of Progress developed but slowly. It could scarcely be cherished when men entertained the older schemes of the universe in which life on this earth was disparaged or when, even among the most intelligent investigators, there was no recognition of the immutability of the laws of nature. It was only through the development of modern science, the slow growth of rationalism, and the unceasing struggle for political and religious liberty that the idea of Progress, the conception of the perfectibility of

human society, and the hope that this earth, itself, may become "a place fit for reasonable beings to live in," could emerge and gain general acceptance. Since 1914, events of tragic memory have given to the holders of this conception, and of this hope, the rudest of shocks. It is but little wonder that some, in despair, should have reverted to the pessimistic theories of Regress and, like Rousseau, have challenged all optimistic and melioristic theories of civilization, or should have gone even further and declared that "civilization is the *causa malorum*." One of my friends, however, who maintained his hopefulness through those dreadful years of the war, has made the cheerful comment: "In future times, our period will be less remembered as that of a "Great War" than as that of the age of the theory of relativity as expounded by the great Swiss physicist and mathematician, Einstein,"² and this may prove to be true. Despite calamities, the human intellect goes on, with its task of enlarging knowledge and of improving the conditions of individual and social life.

Medicine, as a science and as an art, has both benefited from and contributed to the prevalence of the idea of Progress. Since 1870, the growth of the medical sciences, preclinical and clinical, has been unprecedented. Thanks to an ever-increasing substructure in the sciences of physics, chemistry, biology, psychology and sociology and to the adoption in the study of disease of the methods and the principles of these sciences, the pure science of medicine has been built up into a great structure, the constituent facts and laws of which are constantly being utilized by workers in applied medical science to the improvement of the medical art. We observe a chain, each link of which is essential. Without the idea of Progress there could be but little incentive to investigate the laws of nature; without the natural sciences, the pure science of

*Address in Medicine at the Tri-State District Medical Society (of Illinois, Iowa and Wisconsin) at the meeting held in Waterloo, Iowa, October 7, 1920.

1. Bury, J. B. The idea of Progress; an inquiry into its origin and growth. London, 1920, Macmillan & Co. 377 p.

2. Harrow, B.: From Newton to Einstein: Changing Conceptions of the Universe. New York (D. Van Nostrand Co.), 1920, 74 p.

medicine would lack a solid basis; without a pure science of medicine, the applied sciences of diagnosis and therapy would continue floundering in the bogs of empiricism; and without the persistent efforts of enthusiastic applicators of the truths of pure medical science, practitioners of the medical art could make but little improvement. For the welfare of human society it is desirable that all of the several links in this chain shall maintain equal strength. And this equivalence of strength can be kept up only if the supply of forgers for each link be steadily recruited and the workers feel, and live up to, their responsibilities.

Among the newer mechanisms devised by students of the applied science of medicine, none is at the moment more interesting, perhaps, than group diagnosis and group therapy. It is upon this method of organizing clinical work and upon the technique of its execution that I am to speak to you today. The products of applied science are often, at first, but clumsy contrivances, which it is the province of those who work with them gradually to improve upon. This is certainly true of the machinery thus far devised for diagnosis and therapy by groups. It is to be expected, however, that the awkwardness, dangers and difficulties of the instruments now in use will in time, like those of primitive automobiles, aeroplanes, and associations of nations, give place through unremitting thought and diligent practice to less bunglesome devices that will be better adapted to the performance of the required tasks. If my brief presentation of the subject to you, today, should in any way contribute to this end, I shall feel well repaid. The topic is one in which I am personally much interested and I am glad to have the opportunity of discussing it at this meeting of the medical practitioners of three of the greatest states of the Union. The subject chosen is much too large to be dealt with in a short time in all its intricacies and details. With your permission, I shall limit my remarks to a brief statement of what group diagnosis and therapy mean, to some comments upon the changed conditions of medicine that have made them advisable, to a discussion of the principles that underlie them and the methods of organization that have thus far been introduced for utilizing them, and to some remarks upon the functions of group work, and upon the difficulties and dangers that confront

it. Despite the objections that may be urged against it, group work in diagnosis and therapy would seem to have come to stay, for it is, I believe, in line with our general ideas of progress.

DEFINITION OF GROUP DIAGNOSIS AND GROUP THERAPY

Succinctly stated, group diagnosis and group therapy mean the systematic application of the principle of division of labor among medical practitioners of different functions, 1. to the general diagnostic survey of patients, 2. to the treatment of any maladies from which they may suffer, and 3. to the ordering of the physical, mental and social activities of these patients to the best interests of themselves and of the society in which they live.

An efficient diagnostic and therapeutic group, considered as a whole, thus becomes a kind of glorified general practitioner. For, on the diagnostic side, the group yields to the patient the advantages derivable both from thorough analysis and adequate synthesis; skilful specialists analyze the conditions existent in particular domains (circulatory, respiratory, hematopoietic, digestive, urogenital, locomotor, neuropsychiatric, metabolic and endocrine) using any of the methods (physical, chemical, biological, psychical) that can be of help in the accumulation of data, and afterwards, integrators, made competent by training and experience, synthesize the findings into a well-proportioned view of the patient's total physical, mental and social status; and, on the therapeutic side, through a similar delegation of agencies, the patient is assured of the expert application of any remedial measures (general or special surgery, dentistry, nursing, dietotherapy, pharmacotherapy, immunotherapy, mechanotherapy, hydrotherapy, climatotherapy, electrotherapy, radiotherapy, psychotherapy or occupational therapy) that a comprehensive plan of treatment, based upon the general diagnostic survey, may call for. The group acts as a unit doing what a single general practitioner could do if he possessed all the knowledge and all the skill of each of the group components and could multiply his available time and energy to apply them.

EMERGENCE OF THE GROUP IDEA IN DIAGNOSIS AND THERAPY

The idea of diagnosis and therapy by means of organized groups has developed gradually as a

necessary response to the changing conditions of knowledge, technique and civilization. One has only to look back to the state of science, of medicine, and of society in the middle of the last century and to contrast it with that of our time to become conscious of the amazing changes that have taken place. The observational has been happily supplemented by the experimental method. Rough and ready approximation has yielded ever more to precision of measurement. The natural sciences have undergone an astonishing development. Physics, chemistry, biology, psychology and sociology have blossomed and borne fruit. Matter and energy have become better understood and man, busily engaged in subjecting them to his control, has brought about an industrial revolution.

Medicine, in line with the general advance and seeking better foundations for clinical work, has created, in addition to the older anatomy, physiology and pathology, a whole series of pre-clinical sciences (embryology and histogenesis, pathological physiology, biological chemistry, pharmacology, bacteriology, immunology, and psychopathology). Through these, the pure science of medicine has accumulated a vast store of facts and has established an important body of principles. The rise of specialism in medicine and surgery has resulted from the efforts of clinicians to apply our newer knowledge and our modern technique to the diagnosis and treatment of disease. Clinical laboratories have been organized in which the fluids and excreta of the diseased body (blood, sputum, stomach juice, duodenal contents, urine, feces, cerebrospinal fluid, pathological exudates) can be examined by physical, chemical and biological methods. Medical and surgical specialists have devised, in great variety, instruments suited to the examination of special domains. The cleverly contrived investigative armamentaria of the ophthalmologist, the aurist, the rhinolaryngologist, the hematologist, the cardiologist, the gastrologist, the dentist, the urologist, the gynecologist, the orthopedist, the neuropsychiatrist, the clinical bacteriologist, the clinical chemist and the roentgenologist have become so elaborate that special knowledge and special skill are requisite for their expert application in practice. No single person can, any longer, hope to attain to equal skill in the use of all the many instruments and procedures of diagnosis. And the same may be

said of the complexity of modern therapeutic technique. No general practitioner, no general surgeon, no general internist can any longer, unaided, give to patients the benefits that they can. in the more obscure cases, derive, and have the right to expect, from his efforts when combined with the properly co-ordinated (and subordinated) activities of a group of adequately trained medical and surgical specialists.

The medical profession and the laity, more or less conscious of the markedly altered circumstances, have been making their respective adaptations to these rapid transformations of knowledge and technique.

The representatives of medicine have responded in various ways. Far-seeing medical men have persuaded philanthropists to endow medical teaching, research and custody. Medical education has been compelled to undergo an enormous and very costly expansion in order to keep pace with progress. The medical schools with their teaching laboratories and hospitals are being placed upon a university basis better to supply general instruction for students in the preclinical and the clinical sciences. Postgraduate schools are being equipped for continuation studies in medicine and for the training of specialists. Great research institutions are being developed for the solution of special problems in medicine by original investigators. Private hospitals and sanatoria are undergoing multiplication in order that patients may conveniently secure the best diagnostic and therapeutic services of physicians, surgeons, and nurses under a single roof, relieved from the embarrassment and lower efficiency of domiciliary care. And general practitioners, medical and surgical specialists, and diagnostic and therapeutic integrators are discovering the advantages of cooperation as contrasted with isolation and competition and are forming groups of various sorts by which medical practice is conducted to their own greater satisfaction and to the increased benefit of their patients.

These radical changes in medical instruction, research and practice have been accompanied, indeed in no small measure caused by, a change in the attitude of the more intelligent of the laity. The educated layman could not long remain ignorant of the advances in general and medical science, of the importance of differentiation of function and of division of labor in all vocations, or of the superior results that are ob-

tainable in the solution of problems through analysis and synthesis by groups of experts. When the layman found that his family physician had difficulty in solving a medical problem and was dilatory in calling specially trained experts to his aid, he consulted of his own accord, a surgeon or a medical or surgical specialist. The surgeon or specialist thus chosen might luckily happen to be one suited to the needs of the particular case; too often he was not. For some "specialists" are narrow-minded persons and in blissful ignorance of fields other than their own actually do harm to some of their patients through their efforts *aus einem Pünkle zu curieren*. But perplexity was responsible for the layman's floundering; he was simply struggling to find somewhere the relief that the growing reputation of specialism seemed to promise him. Sometimes, such a layman would enter the public ward of a teaching hospital for study, having learned of the all-round examinations made there. But in them, and even in the private wards of teaching hospitals, the work may be conducted by men so enthusiastic over original research in a limited field that they overlook the importance of a general diagnostic survey and neglect it, or if they make it are content with diagnosis alone and fail to institute a desirable and comprehensive therapeutic regimen. And when, later on, complete general diagnostic surveys preparatory to carefully-planned therapy began to be conducted by well-organized groups of private general and special practitioners, the layman warmly welcomed them for they bridged the gap that had halted him. And, recently, he has tended to apply to such groups for a "general overhauling" not only when ill but also from time to time when apparently well, for through education by life insurance companies, by organizations like the Life Extension Institute, and by public health officials, he has glimpsed the significance of prophylactic measures.

The group-idea in medicine is in line, too, with the general tendency toward association and co-operation in modern society. We see the same tendency in other professions (e. g. the law), in the industries, and in political life. As the peoples grow more democratic, groups replace individuals, and tend to become ever larger and more firmly knit together. Though the "Big Animal" does not disappear, he is less in evidence. The bigger a man is, now-a-days, the less

he attempts a splendid isolation, the more he merges his personality in the membership of a group for he knows that, through the subtle interpenetration of the minds of its several members, feats become possible that are beyond the achievement of any isolated magnate.

Clearly, then, group medicine is a logical development. It is the natural consequence of modern conditions. It is the inevitable resultant of the growth of science, the rise of a specialism, the increased intelligence of the laity, the general tendency to co-operative association, the prevalence of the democratic spirit, and the recognition of the advantages of group-psychology.

THE ORGANIZATION OF GROUPS AND THEIR FUNCTIONS

It is to the glory of the medical profession that its better members have thought always first of the welfare of their patients and only afterward of their own. In no occupation other than that of medical practice has there been a greater cherishing of the ideal of self-realization in the service of society. Methods of organizing work that are not in conformity with this ideal have no place in the practice of medicine. But it is, above all, because the properly organized group of practitioners offers and achieves a greater service to the public and a higher self-realization for its components than is possible for isolated individuals that this form of systematized diagnostic and therapeutic activity is justified. Loyalty to their patients and the best employment of their own faculties are the essential principles that should govern the conduct of members of the medical group.

Groups for co-operative diagnosis and therapy may be, and have been, organized in any of several different ways. The size and character of the group and the exact method of organization adopted in any given instance depend largely upon the locality concerned, the men that are available and the particular purposes for which the group is formed. The larger the medical centre and the greater the number of men engaged in special practice, the easier it is, as a rule, to form a competent and satisfactorily inclusive organic group. Through able and attractive leadership, however, some of the best groups now at work, for example and notably that of the Mayo Clinic, have been established in small places and have drawn to them large num-

bers of patients for study and for treatment. The paradigm of group I have in mind is that organized for the conduct of a general diagnostic survey of the patients as a whole and for the prescription and execution of comprehensive therapeutic regimens based upon them. Groups formed for other and more limited purposes doubtless have their place, but I shall not discuss them here.

The steps that have to be taken in the making of a general diagnostic survey, I have described elsewhere. (Briefly in an article entitled: *The General Diagnostic Survey made by the Internist Cooperating with Groups of Medical and Surgical Specialists*, New York Medical Journal, N. Y., 1918, cviii, and more fully in the article entitled *The Rationale of Diagnosis* in the Oxford Loose Leaf Medicine, vol. 1, 1919). They include:—1. the realization of the existence of a diagnostic problem; 2. the collection of data more clearly to define and to locate that problem; 3. the consideration of the facts thus collected in order that, through the use of the scientific imagination, solutions of the problem may suggest themselves to the mind; 4. the elaboration by reasoning of all the implications of each suggestion of solution; 5. the testing, for their validity, of the various suggestions, and the making, when necessary for refutation or corroboration, of further observations and experiments; and finally, 6. the arrival at diagnostic conclusions. These steps involve 1. the taking of a careful anamnesis; 2. the recording of the results of a general physical examination; 3. the arranging, according to the indications of the anamnesis and the general physical examination, (a) certain laboratory tests (b) certain x-ray examinations and (c) certain examinations to be made by specialists in particular domains; 4. the summarizing of all these findings for the integrator; 5. the work of integration and the testing of its results; and 6. the recording of the several conclusions reached in the order of their importance.

In some organizations, the group concerned in these manifold performances is spatially compact (under one roof) and its members are legally all closely related to one another, the relationship being that of partners, of employers and employees, or of constituents of an incorporated body. In other organizations, we see a system of overlapping groups, a leader arrang-

ing for sympathetic and cordial co-operation with a whole series of general and special workers in the city in which he works, requesting examinations in a given special domain sometimes by one man sometimes by another and standing in no closer spatial or legal relationship to each of these special workers than that of one consultant to another. And between the spatially compact, closely knit, and exclusive types of group on the one hand and the spatially separated, loosely interwoven, and more inclusive or overlapping types, on the other, various intermediate forms of group-organization have, in many places, been found expedient. The precise form of teamwork adopted is less important than the function that is performed. What is essential is that the combined activities of the group members, no matter what the form of the group, shall adequately fulfill the group purposes, namely, the making, through analysis and synthesis, of an accurate, comprehensive, properly proportioned, diagnostic survey, conveniently, amicably, quickly and economically, and the planning and, when desired, the executing of an appropriate therapeutic regimen that will secure for the patient all the benefit possible in the present state of medical knowledge and technique.

OBJECTIONS THAT HAVE BEEN MADE TO GROUP WORK

Notwithstanding the objections to group work that have been expressed by its opponents, those who have engaged in diagnosis and therapy in well-organized groups are so convinced of the advantage of this method of practice that they would be loath to go back to the earlier methods of isolated individual activity. As a matter of fact, purely individual medicine is no longer practicable and no one at present strictly adheres to it. Even those who oppose the systematic organization of groups make use of the group-idea to some extent. Thus, they may have their laboratory tests made for them by others; or they may send their patients to roentgenologists for x-ray examinations. They recognize, too, the advantage of, at least, an occasional consultation with one or more of the specialists who limit their activities to particular domains. The most independent and resourceful of general practitioners can no longer satisfactorily carry out by himself all the tests that may be necessary in the study of an obscure case. Group workers believe

that group organization overcomes many of the difficulties and avoids many of the dangers that confront the individual workers in both general and special practice. But it must be granted that there are special impediments and perils incident to the work of groups. Of these, and of the several objections that have been offered group-workers themselves are cognizant, and to a consideration of some of them we may now conveniently turn.

Superfluosness: There are some ultra-conservative physicians who express disapproval of group-work on the ground of its entire superfluosness, maintaining that the older method of individual practice, with the aid of an occasional consultation, fully suffices for the study and care of their patients. They are, they say, "sufficient unto themselves," and they "do not believe in one doctor having other doctors make his diagnoses for him." Such objectors may go so far as to refuse help from any associate, feeling it their duty not only to take the patient's history, and to make the general physical examination but also to make every laboratory test indicated and every examination in special domains required with their own hands and eyes. Faithfully attached to the rites and opinions that have received the sanction of their forerunners, they are unwilling to risk the perils that may attend group-work, which they consider a rash innovation.

Not many, perhaps, now adhere to this extreme and obviously untenable position, but there are undoubtedly many physicians who sincerely believe that group-work and general diagnostic surveys of the kind I have referred to are largely superfluous, though they admit that, in certain obscure and especially difficult cases, they may be legitimate or even desirable. The great bulk of private practice, they consider, can, and should, still be carried on by the method of individual practice. The supporters of group-practice will do well to bear in mind these contentions of the more liberal conservatives. For it would only impede the progress of a good form of clinical work to urge its application where it is either unnecessary or impracticable. It should be freely granted that, in many localities, especially in rural districts, it is at present not feasible; that, in a host of minor ailments, it can be dispensed with; and that, in some contingencies, like those of primary surgical urgency, it must be postponed, or, temporarily, rigidly restricted.

Experience in group practice indicates, however, that its proper field is a much larger one than most of the objectors to it recognize. Very often what appears on the surface to be a minor ailment, or an insignificant symptom, turns out, on thorough study, to be the premonitory signal that a serious condition impends, one that, left unrecognized, may soon advance to an unmanageable stage. Very frequently, too, the symptoms of which a patient complains are far less important than signs that are discoverable only by the use of the more inclusive analytical methods of a general diagnostic survey. A nasal catarrh may be very troublesome to a patient who unwittingly conceals a beginning carcinoma of the prostate. An autodiagnostic person may request the removal of his tonsils when his blood pressure is 270 and his phthalein output is 10. A neurasthenic may clamor for and secure the performance of a series of major operations when what he needs is general upbuilding and psychotherapy. General diagnostic surveys are often most required when the need for them is least felt. They protect both patient and practitioner and luckily the more intelligent of both groups are becoming ever more aware of their usefulness.

The increasing prevalence of ideas of prophylaxis is now giving an impetus to group-practice and to the occasional making of general diagnostic surveys even of persons who are apparently in good health, as a salutary method of insurance. Many men of large responsibilities in business and in the professions have, of late years, adopted the practice of resorting, at more or less regular intervals, to diagnostic groups for a general survey in the expectation of thus increasing and prolonging their health and efficiency. Such men are becoming ever more willing to go to the inconvenience and expense of such examinations: they are eager and grateful for advice that will ward off disease or help them to keep fit. Life insurance examinations and membership in Life Extension Institutes have gone far toward educating men of action to the importance of periodic overhauls and of a hygienically regulated life. Both the laity and the medical profession have been impressed, too, by the revelations made by the examiners of recruits during the recent war. Large numbers of supposedly healthy young men, examined in a single evening by the Medical Boards (made up of general practitioners and

specialists) were found to suffer from corrigible maladies or defects, discoveries that were greatly to the advantage of those wise enough to profit by them. It would seem, then, that for reasons of prophylaxis alone the group method of general diagnosis and therapy is likely to grow in favor. And when we consider all the advantages derivable from group-practice as applied both to recognized illness and to prevention, the argument of superfluity seems to lose much of its weight.

Cost: It is believed by some patients and by some physicians that the cost of group work is prohibitive. The expenditure of time, labor and money for the general diagnostic and therapeutic work that group-practice implies is, they think, out of proportion to the benefits derivable, or is such, they assert, as to make the activities of a group accessible to none but the well-to-do. If these objections were valid and the hindrances irremovable group-practice would be doomed entirely, or seriously restricted in applicability. That they are not valid is demonstrated by the rapid increase of appreciation of the benefits of group-practice by members of all classes, the wealthy, the moderately well-off, and the poor, and the growing numbers from all three classes that are applying to groups for study and for treatment.

The *time* required for a general diagnostic survey by a well-organized group is not so long as many seem to think. In most cases, a period of two or three days will suffice; in some instances, a thorough study may require four or five days; in exceptional instances of very obscure disease, or of metabolic disorders requiring tolerance-testing, a longer period may be necessary. The patients who expect a complete diagnosis of a difficult case in a single day, or between trains, or in an hour intervening between shopping expeditions in a large city or, between visits to an exhibition, are growing fewer. Even these will usually find it possible to adjust themselves to the required conditions when the time-exigency of accurate diagnosis is clearly explained to them. Persons living in the place in which the group is at work can easily make appointments that will interfere but little with their vocations, and those coming from a distance can give themselves over wholly to concentrated study if they desire to minimize the time-allowance. And when it is borne in mind that a complete survey may,

within a few days, satisfactorily solve a diagnostic problem and permit of the immediate institution of the most appropriate therapeutic regimen for a patient that, by piece-meal diagnosis might be compelled to flounder for weeks, months, or even years in uncertainty, or in error, of diagnosis and fail through this longer period to receive the best treatment, it will be seen that the expenditure of time required for the group work is not *extravagant*.

Granting that the time spent is not unreasonable, there are some who feel that much unnecessary inconvenience is suffered by patients who resort to groups for diagnosis and that many tests are made by the physicians of the group that are needless, involving a waste of *energy* on the part of both patient and group members. This misconception seems to depend mainly upon a lack of understanding on the part of the objectors of the nature and significance of the general diagnostic survey. Doubtless many of the tests made may yield normal results, but often these evidences of normality of certain structures and functions are of the greatest help in differential diagnosis. The supervisor of the survey should, of course, possess common sense (as well as medical knowledge and experience) and make good use of it when he decides upon the tests to be made in a given case. In one case relatively few, in another relatively many, may be required. He should call for no unnecessary expansion of the study but he should not shrink from requesting reports that may be of real importance in the total consideration of the case. The most careful and conscientious supervisor will occasionally make mistakes in the ordering of tests, sometimes of omission, sometimes of commission, but the greater his ability, knowledge and skill, the fewer of these there should be. For one of the supervisor's aims will be to restrict, as far as is compatible with safety, the expenditure of energy during the study both by the patient and by the staff of examiners.

As to the expenditure of *money* required for group study and group treatment, it will be found, I believe, that the group method is, in reality, economical. Though the immediate expense may be considerable, the ultimate saving more than compensates for it. Consider, for example, how a patient with arthritis, insufficiently studied at first, may undergo expensive forms of treatment for weeks, months or years,

becoming ever more crippled, whereas a thorough general diagnostic study resulting in the discovery and removal of the focus, or foci, of infection responsible for the arthritis by group study and treatment might have given him prompt relief and have prevented the chronic invalidism! Think, too, of the long undernourished neurasthenics you have known of who have spent large sums over a period of years for a series of surgical operations vaguely undertaken, without sufficient diagnostic consideration, in the hope of relief and who might, had they undergone a complete diagnostic survey by a competent group and then submitted themselves to appropriate therapy, have been restored in the course of a few weeks to comparatively good health! Instances like these, and many others that occur at once to the minds of those familiar with the results of group-practice will go far toward nullifying arguments against it based upon the financial expenditure necessitated. Moreover, medical groups, like individual practitioners, make it a point, or should do so, to see to it that patients do not pay fees that involve any real hardship or inconvenience. By various means (blanket-fee arrangement, etc.) the cost of group study and treatment can be brought within the means of all who require it.

Inhumanity: The charge of inhumanity, of heartlessness, and of lack of sympathetic feeling with the patient, has sometimes been made against group-practice. One hears the activities of a medical group spoken of as the "department-store type" of medical practice; or as a "mere machine" from the "brutality" of which patients shrink. Medical aid, to be effective, these objectors say, must depend largely upon a close personal relationship and they assume that all personal touch with patients is lost when practitioners co-operate in groups. The results of group work are, however, a sufficient denial of the validity of such objections. Group work to be successful must provide for the personal relationships that are essential. And as a matter of fact it does so, when properly organized and conducted. In therapy, especially, the patient is usually under the close supervision of some single member of the group, and the patient not only benefits from the close personal relationship with this member but also enjoys the confidence that the group as a whole has inspired in the accuracy and completeness of his study and in the com-

prehensive regimen planned for him. Recognition of the possible evils of mechanism and provision against them are two of the functions of the organizers of groups.

Cliquism: An important objection to group practice, and one not to be blinked, is the danger of cliquism. There is nothing, perhaps, more conducive to bad feeling in the profession than the belief that coteries of physicians have set themselves up as superior and exclusive associations that try to monopolize practice. Even when groups are composed of competent, sincere, well-bred, and fair dealing members, they may excite the envy or the resentment of other groups or of individual practitioners. Many consultants decline membership in groups fearing that group membership may lessen the wide and cordial relations that they have established.

The method of organization by over-lapping groups, already referred to, the cultivation of modesty, sincerity and absolute fairness to physicians outside the group by all the members of the group, the willingness, on request, to adopt as a part of the group study the reports of any competent specialist who is not directly associated with the group, and unselfishness in the distribution of the patients for therapy after a general study has been made, will go far towards preventing and overcoming antagonism. New conditions require new adaptations of ethical codes; but good will on the part of each member of a group to the profession as a whole and honest intention and effort in serving the best interests of patients should facilitate the necessary adjustments. In any case, the evils of cliquism must be avoided and medical groups should be ever on the alert to discountenance them.

Commercialism: Finally, the criticism that diagnostic and therapeutic groups tend to commercialize medicine, to turn it from a profession into a business, merits comment. It has been intimated that the very organization that group medicine demands—its associations, partnerships or incorporations, its staff of secretaries, stenographers and bookkeepers, its efficiency mechanisms, its systematized financial arrangements—imparts into medicine a commercial spirit that was unknown to individual practice. Even the good faith of the group has sometimes been doubted, the charge being made that the well-to-do patient was being exploited—sent on a

merry-go-round of numerous and superfluous examinations merely in order that the fees to be collected might be multiplied! Or, again, it has been alleged that the public is sometimes deceived as to the constitution of a group; led to expect the co-operative activity of experts, the patients, in reality, have found themselves in the hands of mediocre examiners and of pseudo-experts in specialistic treatment! The relationship of the younger men and of the men of growing reputation to the older and better known members of a group, too, have been questioned, with the oblique hint that the former were often unfairly made use of to advance the private interests of the latter. That abuses of group practice sometimes exist, medical men being human and human nature being what it is, I have no doubt. But that the zeal for group methods of work has, in general, been instigated by sordid motives of interest can scarcely be believed by anyone who is at all familiar with the conditions that obtain in modern medicine or with the personnel of the groups now at work.

The medical profession should not despise the methods that have been devised by good business men. It is no longer "good business" in the commercial world to be dishonest, to deceive the customer, to displease him or to give to him less than is received from him. The "business methods" of physicians have been notoriously deplorable. The lack of system in their work, the loose organization of their offices, the irresponsibility of their appointments, the primitiveness of their accounting (at least before the advent of the income tax), and the lamblike innocence in the disposition of their savings, have been an opprobrium to the profession. If the exigencies of group practice compel the adoption of better "business" methods than those that have hitherto prevailed among medical practitioners, it will be matter for congratulation rather than for criticism.

Moreover, in economic life, evils are prone, in an astonishing way, to defeat the objects of their perpetrators. Any temporary success derived from over-shrewdness, craftiness, extortion, or unfairness is likely to be followed by failure, loss of reputation and disgrace. For this reason alone, and wholly aside from the high ethical standards that guide the conduct of most medical men, there need, I think, be little fear that group

medicine will foster meanness or baseness in its adherents. On the contrary, it would seem probable that, through the imagination and the intellect of group-organizers, the practice of medicine will be raised to a higher and even more honorable level.

CONCLUSION

The results of my analysis of group diagnosis and group therapy are seen then to be, on the whole, favorable to these methods. Group medicine may be regarded as the latest phase of progress in practical clinical work. It is an outcome, as I have shown, of the growth of science, of the principle of division of labor, of the rise of specialism and of certain other factors. The general diagnostic survey, comprehensively, accurately, quickly, proportionally and economically conducted can be of great advantage to persons submitting to it, and therapy, too, can be carried out better through the co-ordinated activities of a group than by isolated practitioners. The arguments against group practice on the grounds of superfluosity, cost, inhumanity, cliquism, and commercialism are seen, on close scrutiny, to lose much of their cogency though they indicate difficulties and dangers against which group workers should be on guard. Now, as always, the profession and the public should welcome modifications of medical procedure that make practice more rational, precise and efficient. Medical practice even at its best can not wholly take away the appetite of people for charlatanism and for superstition. We smile, sometimes, at the age when the Delphic oracle was consulted, but let us not forget that even today the Ouija board is much in evidence and that a distinguished physicist relies upon spirit messages from his deceased son. We look back with amazement to the time of disinterment of the remains of St. Stephen when an "odor like that of Paradise was smelt, which instantly cured the various diseases of seventy-three of the assistants," but we pass over lightly the "spiritual healer" of our own day who promises the complete cure of all diseases, even cancer, to those of sufficient faith! But as medical science grows and physicians become more skillful and better organized the people will become ever less susceptible to the delusions of obscurantism. And among the agencies contributing to this desirable end, group medicine may also find a place.

THE NASAL CAVITIES AND ASTHMA*

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A discussion of the relation between the nasal cavities and bronchial asthma brings up one of the most remarkable chapters in the history of medicine, that dealing with nasal reflex neuroses. It was in 1871 that Voltolini reported two cases of typical bronchial asthma which had been cured by the removal of nasal polypi. This was the first publication calling attention to the relation of the nose to asthma. He discussed two ways by which nasal polypi might produce asthmatic attacks. One was as a nasal reflex neurosis, the other was by hindering respiration, thus bringing about alterations in the chemistry of breathing, and changing the texture of the lung tissue.

For the first ten years after this publication by Voltolini very little appeared in literature touching on this subject, but from about 1881 there began a veritable flood of contributions discussing not alone the question of asthma in its relation to the nose, but the whole subject of nasal reflex neuroses. This discussion brought out some of the wildest prophecies concerning the extent of these nasal reflexes. There were those who seemed ready to believe that there could be scarcely any ailment which would not eventually be cured by treating the nose. These nasal reflex neuroses include many conditions which give rise to symptoms in the respiratory tract, nasal symptoms, laryngeal and bronchial symptoms, including asthma, headaches of various types, as well as neuralgic pains referred to more distant parts, cardiac disturbances, especially palpitation, many gastric symptoms, such as the so-called nervous dyspepsias, hyperacidity, and nausea, uterine symptoms, particularly dysmenorrhea.

As regards the question of the relation between asthma and disease of the nasal cavities, the attitude of many writers is expressed by the following quotation from Bosworth, a noted New York rhinologist: "My own observation would go to show that the existence of nasal disease (in spasmodic asthma) is not an exception, but the rule. I think I may go still further and say that during the past four years, in which time my attention has been especially called to this subject,

I have seen no single case of spasmodic asthma in which the source of this disease could not be traced to the existence of some disease in the nasal cavity. This is a broad statement, but I think one fully justified by my experience."

This assertion by Bosworth is indeed a broad statement. It includes two assumptions: the one, that all cases of spasmodic asthma are associated with pathological conditions in the nasal cavity; the second, that the source of the asthma can always be traced to these nasal conditions. One may not find it difficult to concur in the first assumption, namely that all cases of spasmodic asthma are associated with pathological conditions in the nasal cavity, especially if one is permitted to include such conditions as the irregularities of the nasal septum and the turgescence of the turbinal bodies, both of which may tend more or less to interfere with nasal respiration and bring about that contact between the septum and the outer nasal wall, which many have assumed to be the source of abnormal irritation, giving rise to the reflex neurosis. One finds this assumption still easier to accept if one is permitted to go still further, as have many advocates of the hypothesis of nasal reflex neuroses, and assume that hypersensitive spots exist in the mucous membrane of the septum, as well as on the turbinal bodies, even in noses which appear on inspection to be quite normal, from which reflexes arise capable of causing asthmatic attacks. It is with the acceptance of the second assumption that all cases of asthma can be traced to the existence of some nasal disease, that one encounters more difficulty. To assume that asthma is always caused by one or another of a variety of nasal conditions and that the relief of the asthma depends on the skill and perseverance displayed by the rhinologist in discovering and eradicating these pathological conditions, many of which to my mind are largely imaginary, leaves the question of the nasal treatment of asthma in a most unsatisfactory and unscientific state. Such an attitude must inevitably lead to a great deal of misdirected, unnecessary operating.

There is no room for doubt that a great many cases of asthma are associated with quite tangible pathological conditions of the nose, and further, that a marked improvement in the attacks, even a permanent cure, may be accomplished by the

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proper treatment of these nasal conditions. The question arises: have we today any more accurate method of diagnosing the nasal conditions capable of influencing the asthmatic attack than had those who looked upon asthma purely as a nasal reflex neurosis capable of being set up by such conditions as irregularities of the nasal septum, turgescence of the turbinal bodies and hypersensitive areas scattered here and there over the mucous membrane. The answer to this question is, I believe, quite positive. In the first place, not wishing to assume that the last word has been said regarding the question of nasal reflex neurosis as a cause for asthmatic attacks, one cannot observe the phenomena of asthma without recognizing the close resemblance between these attacks and the phenomena of anaphylaxis. Moreover, we find ourselves more ready to accept the view that the nasal symptoms, the sneezing attacks, turgescence of the cavernous tissue of the turbinal bodies, and the increased nasal discharge, are a part of an anaphylaxis, rather than the actual cause of the asthma itself. On the other hand, there are certain definite pathological conditions found in the nasal cavities in most cases of asthma, the correction of which not infrequently has a decided effect in checking the asthma. These nasal conditions have to do directly or indirectly with the disease known as hyperplastic ethmoiditis, a non-suppurative disease of the ethmoid, in which the mucous membrane lining the ethmoid cells undergoes polypoid degeneration, filling the ethmoid labyrinth and eventually protruding into the nose, thus forming nasal polypi. It was in the removal of these nasal polypi that Voltolini first discovered the cure of two cases of asthma, and which led, as pointed out above, to the theory of nasal reflex neuroses, followed by a veritable flood of operations on all sorts of nasal conditions. We come back now to the place from which Voltolini started in 1871, that nasal polypi, in other words, the condition known as hyperplastic ethmoiditis, is often associated with asthma, and we have found that the removal of the polyps and eventually an exenteration of the ethmoid labyrinth, not infrequently has a very favorable influence on the asthmatic attacks. To bring this very definite clinical fact to accord with the view that asthma is the phenomenon of an anaphylactic reaction, one may assume that by ridding the nasal cavity of polyps and by clearing the

polyps out of the ethmoid labyrinth, we have removed foci in which bacterial toxins tend to accumulate.

When we have reached this point, namely, that asthma is not only very often associated with the condition known as hyperplastic ethmoiditis, but that the eradication of this condition frequently affects most favorably the asthmatic attacks, two very definite problems arise; one is the question of the diagnosis of this form of ethmoiditis, the second is its proper treatment.

In an advanced stage the diagnosis presents no difficulty, as it is associated with the presence of nasal polypi, which can readily be recognized by anterior rhinoscopy. This is true, however, only of the advanced stages, for the ethmoiditis may exist many years without ever producing polypi which protrude into the nasal cavity. The diagnosis in these early stages of the disease is still possible by prying open the middle meatus, thus gaining an inspection of the floor of the ethmoid there exposed. When a degeneration of the ethmoid is going on, one can usually recognize the edematous changes in the mucous membrane in the middle meatus. A still better way of diagnosing this condition, in many cases, is by use of the post-nasal mirror. By this means one can usually obtain a view into the recesses of the ethmoid, which cannot be gained by anterior rhinoscopy, and can easily diagnose those changes in the mucous membrane characteristic of this disease.

As regards the question of the treatment of hyperplastic ethmoiditis: this is purely surgical. It is not sufficient, as was formerly practiced, to merely remove those polypi which appear in the nasal cavities, although occasionally, as has been experienced by various observers, this may suffice to cure the asthma, at least for a time. We aim now at the radical exenteration of the ethmoid labyrinth. In exceptional cases a single operation puts an end to the process, and may cure the asthma permanently. In many cases the polypi return, even when one has done everything feasible, with safety to the patient, in completing the exenteration of the ethmoid. Not infrequently one is called on to clean out the ethmoid at intervals of one, two, or more years, each time putting an end to the asthma until such a time as the polypi have had an opportunity to re-form. In some cases the symptom of asthma is influenced very little, if at all, by the operation

on the ethmoid, and it seems not unlikely that in these cases the neighboring sinuses, the frontal and maxillary sinuses, may also be the seat of polypoid degeneration.

There is an interesting fact in connection with the etiology, as well as with the treatment of hyperplastic ethmoiditis. Not infrequently the development of this condition seems to be dependent on the existence of anatomical variations, especially a high deflection of the nasal septum, which tends to crowd the middle turbinal against the outer nasal wall, thus closing tightly the middle meatus and interfering with the normal ventilation of the ethmoid labyrinth. It is found, moreover, that by re-establishing the ventilation of the ethmoid, that is by the correction of the deflected septum, and eventually the resection of the middle turbinated body, the degenerative changes in the ethmoid tend to disappear. This fact may have been responsible for those cases of asthma cured by the correction of a deflected nasal septum, and apparently serve to verify the theory that an irregular septum, by impinging on the outer nasal wall, sets up a reflex neurosis responsible for the asthma. I have never seen any relation between asthma and the so-called spurs of the septum, even in those cases best suited to produce irritation, that is where a sharp spine of the septum impinged on the outer nasal wall. I have never seen any other irregularity of the septum having any influence on the asthma, except the condition already described, where a high deflection acts as a factor in impairing the normal ventilation of the ethmoid. Thus far we feel that the nasal treatment of asthma may proceed with a reasonable assurance that our efforts are entirely justified by the results obtained. Beyond this we feel that the rhinologist is venturing on an, as yet, largely uncharted sea, in which he cannot proceed with too much caution if he would avoid the danger of unnecessary operating.

SUMMARY OF CONCLUSIONS

1. Asthma is often associated with very definite pathological changes in the nasal cavity.
2. The pathological condition associated with most cases of asthma is the condition known as hyperplastic ethmoiditis.
3. This condition is not only associated with many cases of asthma but its correction has often a very decided influence on the asthma.

4. The relation between the nasal condition and asthma appears to be not so much one of a nasal reflex neurosis as it is that of an anaphylactic reaction.

5. The improvement in the asthma resulting from operations on the ethmoid may be due to the elimination of foci harboring bacteria and their toxins.

6. Hyperplastic ethmoiditis frequently exists for a long period of years without any tangible evidence, such as the presence of nasal polypi in the nasal cavity. The diagnosis in such cases is made by forced inspection of the floor of the ethmoid in the middle meatus by anterior rhinoscopy or by means of the post-nasal mirror.

7. Anatomical variations tending to interfere with the normal ventilation of the ethmoid, especially the high deflection of the nasal septum, may sometimes act as an etiological factor in the production of hyperplastic ethmoiditis.

8. A cure of the hyperplastic ethmoiditis, especially in the early stages, may sometimes be accomplished by overcoming the impaired ventilation of the ethmoid cells, that is by correcting the deflected nasal septum and by removal of the middle turbinated body.

9. Some cases of asthma are permanently cured by an exenteration of the ethmoid. In other cases, the asthma returns when the polypi re-forms. In some cases the asthma appears to be but little influenced by the operation on the ethmoid. The explanation of the latter cases may be that the frontal and maxillary sinuses are also the seat of polypoid degenerations.

DISCUSSION

DR. JOSEPH L. MILLER said the theory of asthma was now fairly definitely plain, and that what happened in an asthmatic attack was a bronchial spasm. One point that needed emphasis was the danger and unnecessary use of morphin in asthmatics. It was surprising how many were given morphin, and yet they experienced no greater relief than they would from the use of adrenalin. Since asthma was now being looked upon as an anaphylactic manifestation, our attention has been directed away from the nose and accessory sinuses in connection with asthma. The presence of foreign growths, like polypi, might lead to irritation which would give rise to bronchial spasm in the same manner as bronchial asthma could be produced experimentally in animals. Furthermore, the existence of polypi favored the growth of bacteria. Recovery not infrequently followed the removal of polypi from the nose. This group of cases fell under the classification known as bacterial asthmas. Whether such polypi could act as

foreign growths and affect the vagus was a matter which had been discussed.

Formerly, the diagnosis was considered complete when it was decided the patient had bronchial asthma, but now the diagnosis was not complete until we had determined what was the cause of the bronchial asthma. In other words, into what one of the four groups should the case fall? Was it a bronchial asthma due to animal emanations; was it bronchial asthma due to food or pollen, or was it an asthma due to bacterial infection? We were more and more inclined to believe that all asthmas could be placed in one or the other of these groups. A correct diagnosis was a great aid in instituting proper treatment. Formerly, asthmatics were treated by the use of iodids and by climate. A number of asthmatics were relieved by climate, while others were not. It was generally recognized that it was impractical to desensitize a patient who had food asthma. While this could be done, the task was laborious, required much time, and frequently desensitization of the patient was of such short duration that it offered very little hope. In the group of food asthmas it was still necessary to handle them by withholding the particular article or articles of food from the diet.

In regard to pollen asthmas and their treatment, desensitization was fairly satisfactory, but on account of the short period of time the patient was desensitized, he required redensitization every six months or a year, which made this method of treatment unsatisfactory in the end. He did not know what the experience of others had been, but his experience with the treatment of bacterial asthmas by the use of vaccines had not been satisfactory. He had seen severe cases of bronchial asthma at the County Hospital in which autogenous vaccines had been used with very little results, so that he had become discouraged in regard to their use.

A patient with a chronic infection of the bronchi should go to a suitable climate, and if he does, the attack will subside, and he will remain well as long as he stays there.

THE PRINCIPLES OF DRAINAGE IN EMPYEMA*

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(Abstract)

There is a great similarity between the pleura and the peritoneum. In both these cavities inflammatory affections are essentially secondary to diseases of the contained viscera and are attempts to limit or cure the primary lesions. In the abdomen the primary lesions are usually limited in extent (e. g. appendicitis or duodenal

ulcer). If nature's methods are not interfered with by neglect or still worse by injudicious treatment, the secondary peritonitis walls off the disease and may result in resolution or in the formation of a local abscess. The lesions being limited, early operation is well calculated to lead to prompt and permanent cure.

Empyema is usually the result of pneumonia. As a result of the pneumonia, changes take place in the pleura more or less similar to those seen in peritonitis; effusion; exudates; formation of adhesions. These are evidences of attempts to limit the disease and when not in excess are useful. When pus is found in quantity, the previously protective pleuritis becomes in itself a danger. While the primary or pulmonary disease is active, interference with pleural condition is wrong, except when that condition is excessive and then the excess alone should be attacked by aspiration which may require to be often repeated. When the pneumonia has improved markedly and empyema persists, then the pus must be removed.

It is needless in this abstract to discuss the common and often useful and successful methods of treatment by puncture, with sterilization by means of Dakin's solution or by incision with removal of pus and fibrin after which the pleura is filled with iodoform emulsion and closed without drainage.

The principles of drainage alone need interest us at the present. One must remember that adhesions may cause encapsulation of the pus in one or several places and hence that exploratory operation is often necessary. One must also remember that the costo-diaphragmatic angle is often obliterated by adhesions. The classic operation for empyema is to establish drainage at the 5th or 6th rib in the posterior axillary line, but this position does not correspond to the low point in the pleura whether the patient is lying or sitting. One must remember that on each side of the vertebral column a gutter exists which can only be drained by an opening at the angle of a rib, the patient being in the dorsal decubitus. The most thorough method in which to obtain drainage whether the patient be lying or sitting, is to make a free opening at the level of the 5th or 6th rib, to find the low point (for any decubitus) by means of exploration with the finger or forceps and there to establish drainage. The

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primary opening may be used for the insertion of Carrel tubes or may be left alone.

Some surgeons endeavor to obtain sterilization of the cavity by means of air or oxygen passed through ether or formalin and introduced into the bottom of the pleura through the drainage tube. If drainage has been established on the principles enunciated sterilization of the cavity is usually unnecessary.

SOME EXPERIENCES HAD IN DEALING WITH APPENDICITIS DURING THE PAST TWENTY-FIVE YEARS*

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I have chosen this subject thinking some of it may be of interest at least to you who have been plodding along as I have during the past twenty-five years, trying to do the things, as we saw them, the best we knew how.

I might say in the beginning that I never witnessed an abdominal operation while in medical school, so that most of the knowledge I have obtained has been acquired since I graduated: much of it has been from my association with other men.

I tried not to make the mistake that I see so often made by the young man who graduates and thinks he knows more than any man in the community, just because he is a recent graduate from a top notch medical school.

Many of them today have started in surgery, gotten in deep water, lost their nerve and given it up, mainly, as I see it, because they have failed to have someone with them who has had experience.

I remember a few years ago of an anatomical freak who made his living by demonstrations before medical men.

He could dislocate eighteen different joints of his body, besides bringing down a hernia on either side. He invited the Doctors to the hotel in the evening and they would chip in fifty cents to a dollar for his entertainment. He went to see one of the M. D.'s and invited him to his exhibition, and the Doctor said, he had received his education and was not interested.

This was something he never saw in medical college. The man would have his wrist, elbow

and shoulder out at the same time also the ankle, knee and hip.

If a man depends on what he has gotten in medical school (even to-day when, I grant that he is loaded to the brim) he is going to be a sad mistake.

This will be rather a report of cases winding up with how it is being done by me to-day.

Case 1. My first case in detail, because it was first: I was called in January, 1895, to see a boy in Moline, who had been attended by two very good physicians, who had given him up to die. He had been sick three weeks with trouble in his abdomen, and it had been called everything but appendicitis. The older doctors at that time were rather inclined to doubt this appendicitis, calling it typhlitis, perityphlitis, etc.

I was called in at the request of a friend because he had been given up, and after the doctor was discharged I took charge of the case. The boy, who was about eighteen years old, had a lump at McBurney's point about the size of a goose egg, which I thought was appendicitis, but I had never seen a case before. I said to his mother, "You have had two very good doctors on this case and I am going to ask you to have still another," and suggested the late Doctor Middleton, who was at that time Professor of Surgery at Iowa City, and chief surgeon of the Rock Island Railroad.

I have often quoted his remarks. When the mother asked him what that lump was, he said, "Madam, you might as well ask me to tell you how much money there was on the inside of a safe without opening the door. I might guess at it and strike it, but the odds are pretty much against me. I know there is something there that ought not to be there and he needs an operation."

I operated on him the following morning, assisted by Doctors Middleton, Hill, Hall and Ludewig, and we drained an appendicial abscess, and found two grape seeds, which at that time were supposed to be the cause of appendicitis.

I did not think of it at the time but have thought many times since that either Dr. Middleton or Dick Hill, as he was commonly called, brought the grape seeds with them, but I did not think of it until after they were both dead. The boy made an uneventful recovery and was with Ringling's Circus twelve years later.

He was operated upon at home.

My records previous to 1903 are rather poor so I must trust to memory to a very great extent previous to that time.

I am listing only cases which were either pus cases with perforation and gangrene or on the verge of gangrene.

Case 2. One of my early fatal cases was a boy upon whom I operated at Mercy Hospital, Davenport, Ia., something over twenty years ago. He died from an insufficient drainage. His age was around

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nineteen or twenty years. He was rather sick to be moved so far but there was a strike of the staff at St. Anthony's Hospital to obtain trained nurses and a training school, and the staff refused to take patients there until this was granted in about eight weeks. Anyway the boy had a perforated appendix with a belly full of pus. He was drained and the appendix removed, wound was closed tight with exception of a small cigarette drain.

I believe this boy would be saved today, because I have saved many cases which seemed worse than his, by free drainage and Fowler position.

Case 3. The next case I wish to report was a man about 67 years of age, with a gangrenous appendix accompanied with a severe attack of dysentery. As I remember the case the man lived about one week and died. His appendix was removed and, I believe, wound was closed except for small drain.

There was nothing of importance about the case except that the family all blamed me for the death, knocked me whenever they could and never paid their bill.

Case 4. Another case I wish to report about this same time was a man about 25 years old, operated on in the midst of a spreading peritonitis; appendix perforated and belly full of pus. I cannot remember details of his case except he died a few hours after operation, and his mother had a very nervous spell at home and a brother physician was called in and informed her that she should have been at the hospital when he died by all means. This started the inflammation which usually begins soon after a doctor has lost a case, and none of the family would even speak to me nor any one who had anything to do with the case.

Case 5. Lady, married one month, taken with severe pain in abdomen and vomiting, pain was so severe that I was called to telephone three times to come and see her before I could finish eating. She had excruciating pain at McBurney's point and other typical symptoms of appendicitis.

I operated on her thirty-two hours from onset of symptoms. When appendix was delivered into wound my assistant said, "there is nothing the matter with that appendix." I replied: "Well, I am going to remove it anyway," because if this lady didn't have appendicitis she had all the symptoms. After she was returned to her room, the appendix was opened and the entire mucous membrane was gangrenous.

Case 6. Along this same line but much later. Lady about 23 years old, with acute appendicitis, and rather septic looking, almost bordering on jaundice.

A friend of the family said just before we entered the operating room: "Doctor, don't you think maybe it's her gall bladder?" I said: "No, but we will look at it." I made a poor incision for her appendix because it proved to be a retrocecal appendix so I had to make a cross incision to get it.

Appendix looked quite normal, but when it was opened there was a gangrenous patch in mucous membrane about one-fourth inch in diameter. Both of these cases made uneventful recoveries.

Case 7. A man around 20 years of age, about six feet tall, a big, strong, husky looking fellow with a pulse of 120 and a septic looking skin, temperature around about 99.

He came to my office in the afternoon, then again the following morning; he looked sicker than he seemed on examination. I sent him to the hospital on the rapid pulse and look on his face, operated on him that afternoon. He had been walking around with a perforated appendix and a belly full of pus. He recovered without any post operative symptoms I am unable to recall details of operation except appendix was removed.

I cite this case and the one preceding it to note that now and then these septic processes are portrayed on the face, as I have seen on various occasions.

Case 8. Another most interesting case along this line, although occurring several years later, is worth reporting in detail. Oct. 7, 1904, a man about 6 feet two came to my office complaining of pain just over pubic bone and bladder, and said he had been sick two days.

He was very rigid and looked rather cyanotic, and after examination I said to him: "You have either had appendicitis or you are going to have appendicitis, or something has gone wrong inside your abdomen," fixed him up some medicine and told him to come back next day. That night he was much worse and they had just moved next door to a physician and their telephone not being installed they called the doctor next door. The doctor remained with him several hours and made a diagnosis of obstruction. Next day they called me in and I invited the doctor to go with me.

We examined him under ether; his abdomen under ether had that board-like rigidity. He had hemorrhoids, I made a rectal examination after divulsing the sphincter, but we were unable to get anything through him.

His temperature was only slightly above normal, as was the pulse, but something seemed to tell me things were decidedly wrong in his abdomen.

There was no fecal vomiting so could not fully satisfy myself with obstruction diagnosis.

I told his wife that if he was no better in the morning he would have to go to the hospital and have operation and find out what was the matter with him.

He seemed little if any worse the following morning but something made me feel that we must get in there.

I went in that morning in the median line, because that was where he had his pain. When the abdomen was opened the entire small intestine came out on the abdomen and we could not return it. I felt for the appendix and found it about in its right location.

It was necessary to make a cross incision in order to get it. The appendix was absolutely rotten with perforation at tip. The entire small gut was beginning to turn back. No one present in operating room expected him to live. The question was what to do with intestines.

I had never heard of deliberately puncturing them and said to my assistants that I was going to puncture them anyway, adding that it would fix him up in better shape for the undertaker. I made a small puncture which let the air out and this was followed by a tea cup full of greenish, black looking fluid. I closed the puncture with several purse string sutures, returned bowels to abdomen, sewed up transverse incision and left median incision wide open and held open by two gauze cofferdam packs of iodoform gauze.

He was returned to bed and had a very comfortable convalescence without complication of any kind; even the hemorrhoids were relieved from the severe stretching.

I have always considered him one of my worst cases. His appendix was removed after making cross incision.

Case 9. This seems to follow the one just reported and was extremely interesting in another way. Married lady, about 25 years of age, had a lump in abdomen about under the umbilicus, size of a cocoanut. After examination, I told them I thought she had a tumor. When I said that the mother said that I had told her three years before she had appendicitis and advised operation, but that they would not consent to it and let me go. It had been long enough for me to have forgotten all about previous diagnosis and I said in reply: "Well, maybe it still has something to do with her appendix." She said that for past three years she had been having sick spells and when she got real bad the doctor would let out a quantity of pus back of the womb and she would be all right until it reaccumulated, when this had to be repeated.

She was taken to hospital and I opened over lump in median line and found, what I first thought was an inoperable mass, but after working with it a short time discovered the lower part of ascending colon leading down into the mass and by loosening up adhesions finally located a perforated appendix, which was feeding pelvic abscess.

Removed appendix and drained through incision and she was relieved of all future trouble from pelvic abscess, making an uninterrupted recovery.

Case 10. A gangrenous appendix *without pain*. At operation appendix was very necrotic, but was completely surrounded by omentum; this either muffled his pain or the necrotic process must have anesthetized his sensory nerves going to appendix.

Appendix and portion of omentum covering appendix was removed, small drain inserted and balance of wound closed; complete recovery.

Case 11. Only interesting because it was the last case in which I relied on a purse string suture to close stump of appendix. This was June 14, 1905. He had a post operative hemorrhage into bowel, or rather several of them, and became quite anemic. I did not lose him but came near enough so that since that time I always ligate the appendix and I am sure there will be no anomalous blood vessel that might escape a bite in purse string and bleed into bowel.

Case 12. Man, aged 29 years, desperately sick. Appendix so rotten, could not be tied off; cat gut cut through like tying a rotten apple; clamped off with two clamps, after tying two ligatures loosely, clamps left in wound.

While straining, second or third day following operation, patient forced out about eight inches of ascending colon. This was carefully replaced and he was kept in bed six weeks when he was allowed to sit up. The change of position caused obstruction of bowel, he vomited fecal matter and had other obstructive symptoms for several days. Operation was postponed because obstruction was thought to be due to change of position and might adjust itself, which it did. Wound had been left wide open; it was before we were using adhesive strips, which might have retained colon.

After all his post operative troubles he healed up without hernia or other sequela.

Case 13. Man aged 55 years. Father died of cancer of the stomach. Patient has not been well for 30 years, has tumors of various sizes, all over body. Developed symptoms of appendicitis about three or four days ago. Was operated upon June 24, 1907. Intestines covered with lymph, appendix gangrenous and perforated in three places. Unable to return intestines to abdomen, so they were punctured to let out gas; bowel contents liquid, almost black.

Patient died six hours after operation; temperature and pulse very high before operation. Record does not say how case was treated as regards drainage and treatment of puncture but foot note says, "operation done well enough but not soon enough."

Case 14. Lady, aged about 45 years, had operation four or five years ago. People said it could not be appendix this time because she had had an operation before. Her symptoms were, first pain in upper abdomen, then at McBurney's point; very tender here, some elevation of temperature and pulse.

Her symptoms were typical of appendicitis, so we decided it would be best to operate and find out what the trouble was.

On opening the abdomen we found that it was an acute appendix, and they thought so much of their former surgeon, that we sent for her husband to come into the operating room to prove that we were not trying to put anything over on him.

A few days after operation they said, "Doctor, I guess we were mistaken about previous operation. When I was operated on before, a few days after the operation, I asked the doctor if I would have any more trouble. He said: 'No, we have removed everything.' He had removed the uterus, both tubes and ovaries."

Case 15. Man, aged 40 years, operated on Sept. 13, 1901, at his home at night, the only light being a kerosene lamp. One of my assistants had never seen an abdominal operation and the other only a few. Appendix had ruptured and abdomen was full of pus. He was quite septic and in bad condition generally, so appendix was left in and wound left wide open with cofferdam dressing.

He made a good recovery and is alive today. I am not sure but that he has a post operative hernia, but I feel that we saved his life. Today we would likely have gotten his appendix because I am quite sure I have taken out many that were worse without losing the patient; possibly because we know better how to do it.

Case 16. Young man, about 20 years old, with obscure symptoms. Two other physicians had seen the case and helped at operation, the older one said, when I came into hospital: "You may find a catarrhal appendix but that is all." I said: "I hope so, but I am afraid." He, the physician, had called it acute indigestion. The appendix proved to be rotten and perforated while I was taking it out.

Case 17. Sometime about 20 years ago I was called to an adjoining town to operate on a case of appendicitis. When I arrived the doctor said: "I wish you would examine him, he seems better, but half an hour ago he was in great pain." He was free from pain, temperature, and pulse normal, abdomen soft and no symptoms whatever. He had been suffering for three days with typical appendicitis symptoms, which let up about 30 minutes before I arrived. I said to the doctor: "I believe he has had a perforation and that likely I will not get back home before he will have serious symptoms."

So we operated on him and found his appendix with a side wall perforation large enough to admit a lead pencil. Appendix was removed and he recovered without complications but I don't remember the details of the operation.

Case 18. Lady, aged 22 years; pains all over abdomen for six days, vomited once a short time before operation, bowels loose, temperature first 24 hours around 103, most of time pulse 120, one chill on second day; menstruation came normally two weeks before, then again on second day of attack, very tender all over abdomen, possibly a little worse at McBurney's point.

Through a median incision found a ruptured, gangrenous appendix, foul smelling pus and a general peritonitis.

Patient died one hour after operation, operation likely done well enough but not soon enough. We were not able to stop the absorption of toxins. It was evident at the start there was no hope for the lady without operation and very little with operation.

One's opinion as to what to do and what not to do in such cases is difficult to determine, and I believe it must always rest with one's own judgment at the time he sees the case.

If I were 100 miles from a good surgeon and felt that I had a busted appendix with a belly full of pus, believe that I would let any Doctor make a hole in my belly and let out the pus, but if I thought it was not ruptured would wait until I reached a good surgeon.

Case 19. Man, aged 21 years, complained only of constipation at first, but following had symptoms of appendicitis. Was operated upon the fourth day of attack; appendix had perforated and was gangrenous, abdomen full of pus, intestines covered with lymph generally congested. Appendix in such a condition that it could not be ligated safely; it was loosely tied off and clamped with three clamps, which were left in and wound was left wide open with cofferdam dressing. He was put in Fowler position and given Murphy drip but died on the ninth day following operation from absorption of toxins.

Case 20. Girl, 13 years of age, general peritonitis, respiration 54, temperature 102, pulse 132, generally septic, operated on July 13, 1913; free abdominal pus, appendix perforated and gangrenous, also patches of gangrene on adjacent tissues. Appendix ligated below perforation, wound left open with cofferdam drainage. Patient did not rally; died about six hours after operation. This case likely should not have been operated on; at any rate, the appendix should have been left, although it was very superficial and easily gotten at.

Case 21. Boy, aged 18 years, operated on May 27. Much thick pus, lymph on intestines, appendix perforated; three clamps left on and surrounding stump, two tubes and cofferdam left in for drainage. upper angle sutured. Patient died next day, disease not arrested. Possibly it would have been best not to have gotten this appendix until later, but it is my opinion that the cases where there is much lymph distributed around on intestine that their chances for recovery are very much lessened.

Case 22. Man, aged 28 years; temperature 101, pulse 100, pain at first upper abdomen, some vomiting; pain locating over appendix; operated on 6th day after onset.

Intestine adhered to parietal peritoneum and covered with lymph; appendix likely imbedded in mass below cecum, free thick pus. It was thought best not to look for it; some diseased omentum was removed, dressed with cofferdam, upper part of wound closed partially. Patient recovered with a hernia, developed obstruction and was operated on one year later.

Appendix difficult to find and remove, pus was present; hernia was repaired and he was drained again, but did not survive, dying two days later from spreading peritonitis.

Case 23. Man, aged 23 years, operated on March 16, 1914, about 48 hours after onset; thin pus free in abdomen, intestines covered with lymph, appendix perforated and so badly diseased that it almost tore in two on being removed.

It was impossible to suture or ligate so it was clamped off with five hemostats which were left on and around appendix stump; wound dressed with cofferdam and one tube.

Patient recovered with three sinuses, one communicating with navel, he continued to discharge pus and was reopened six months later and all sinuses made to communicate with each other.

Adhesions were broken up, fascia and muscle severed in many places. After being swabbed pretty generally with iodine the wound was packed with gauze and a separate tube drain placed in lowest angle of wound and a separate one placed in a stab wound, some of wound sutured. Recovery was interrupted after this radical operation.

Case 24. Man, aged 26 years, free abdominal pus. intestines covered with lymph, appendix perforated and gangrenous. Two clamps, a cofferdam and three tubes were left in wound, upper angle sutured, recovery perfect.

Case 25. Girl, aged 7 years, similar to Case 24, treated much the same with one clamp, a cofferdam and one tube left in wound; recovery perfect.

Case 26. Lady, aged 58 years, operation 8th day of attack. Large quantity bad smelling pus, omentum and intestines in a mass; unable to locate appendix without endangering life of patient. Pus wiped out, ether poured in wound, left open with double cofferdam dressing; recovery without sequela.

Case 27. Boy, aged 16 years; simple drainage, no attempt made to find appendix, patient being in bad condition.

Ether into wound, cofferdam dressing, upper part of wound closed, well until six months later had recurrent attack. At operation appendix very difficult to locate, intestines inflamed and adhered to each other; appendix found in abscess cavity, perforated, intestine covered with lymph, appendix was removed, small cofferdam drain left in lower angle of wound, balance sutured; perfect recovery.

Case 28. Boy, aged 8 years, operated on Nov. 21, 1917, fourth day of attack; free pus, appendix curled up, gangrenous, covered with lymph, small pin point perforation.

Appendix removed, ether poured in wound, cofferdam pack lower half of wound, balance of wound sutured, died Dec. 1, 1917, from absorption of pus; operation did not arrest the process.

Case 29. Girl, aged 8 years, operated on eighth day of attack; free thick pus, intestines adherent and covered with lymph. Appendix was not removed. Patient was in rather bad condition; wound left open with cofferdam and two tubes; complete recovery, no complication, now five years.

Case 30. Boy, aged 17 years, very much like Case 28, treated the same, now six years and no trouble seems to have come from leaving appendix in.

Case 31. Man, aged 21 years, operated on about the fifteenth day of attack; free pus, adhesions, peritonitis. Patient's general condition very bad; nothing was done except to get in and get out as quickly as possible.

Wound was left wide open with cofferdam. The second day he ballooned up and seemed about to pass away. Wound having been left open intestines were very easy to puncture, so a small hole was made in most protruding loop, relief was immediate and he proceeded to get well.

He had a fecal fistula and returned to hospital

some time later for its repair. After reaching hospital took a coughing spell and a loop of gut came out through fistulous tract; this gut was returned and that was the end of his fistula, this demonstrating the assistance nature is to us if we give her half a chance.

Case 32. Boy, aged 15 years, only interesting in showing rapidity with which gangrene develops. Taken sick at 5 a. m., operated on at 8:30 p. m. Appendix gangrenous from top back one inch, but not perforated.

Case 33. Man, aged 58 years. Appendix perforated and gangrenous, removed, wound sutured except for small drain. Patient remained very sick and died one week later. Autopsy findings; tissue about appendix operation normal, mesentery of entire small gut thickened from one-half to two inches in some places. On questioning the relatives learned that eight years before he had had a cancer removed from his lip, evidently this was a metastasis in mesentery and may have been the cause of his gangrenous appendicitis, the circulation having been much disturbed in mesentery.

Case 34. Lady, aged 49 years, operated on Aug. 4, 1919; oblique incision at McBurney's point; little free fluid, appendix gangrenous entire length, also perforated, pocket of pus about one tea cup full. Appendix ligated, cavity filled with ether, one soft rubber and one gauze drain, wound sewed except at drainage point, cellosilk tissue applied over suture line.

Patient had rather a stormy time for two weeks, bowels filled with gas and a loop of intestine bulged into wound. To relieve the distention a hypodermic needle was inserted into protruding bowel and fastened there until all the gas had escaped, this gave her complete relief and she recovered after quite a long confinement. Was left with small fecal fistula, which will likely close in time, it does not discharge any to speak of now, and it has been my custom to allow nature to take care of fecal fistulas unless patient is losing ground or unless it runs over a year.

Case 35. Girl, aged 12 years, operated on April 22, 1911; sick about a week, symptoms more like typhoid, free pus in abdomen, appendix gangrenous, dense adhesions; appendix removed subserously. Tube drain left in wound, which drained nicely for some time, but she had chills continuously both before and after operation, and died May 13, just three weeks after operation.

Autopsy findings: neighborhood of appendix normal, multiple abscesses in liver, one containing a tea cup full of pus.

Six weeks before beginning of appendicitis she had a severe attack of mumps. Whether the mumps caused the abscesses in liver and they caused the appendicitis or whether the appendix caused the liver abscesses we were unable to determine.

She had in all thirty chills following operation and a similar case would lead me to reoperate and explore the liver.

Case 36. Lady, aged 47 years; acute appendix, about 48 hours duration. Patient was suffering from an exophthalmic goiter, pulse running from 120 to 160. She was so sick with goiter that I was afraid to give her an anesthetic, and she was so sick with the appendicitis that I was afraid to take a chance without operation, so we operated on her. Found a condition I had never encountered before; her appendix was mortised into the lateral and posterior abdominal wall so perfectly that we said, at first glance, that here was where it was. After a short search we found that the cecum terminated at the beginning of this gangrenous area and after working in this neighborhood for a short time began to shell the appendix out of a perfectly fitting trench, made for it in the lateral belly wall. She made a perfect recovery and best of all her goiter symptoms have all disappeared.

Case 37. Man, aged 31 years, operated on the 10th day of attack. Appendix very hard to locate; on opening a deep seated abscess the whole of the appendix, except the serious coat, wormed its way out of the abscess cavity. This part of the appendix was tied off and wound filled with ether and closed, except for two small drains. He had a very stormy convalescence, he had obstruction of bowels, vomited fecal matter for several days, even after we made a fecal fistula, but I hesitated to reopen the abdomen on account of the seriousness of his case. He was operated on in December, 1919, and still has a very small fistula, which nature seems to be taking care of.

He was one of four cases that I operated on in 19 hours one day last December. They were all perforated, and all recovered except the one who died about three weeks after operation with pulmonary thrombosis.

While this list is not large and only represents a portion of the cases, it shows some of the most interesting cases I have had and partially the general line of treatment carried out.

There were 156 cases in all of perforated appendices, about 60 of which were left wide open with cofferdam drainage. In about 15 the appendix was not removed and, as far as I have been able to ascertain, only three of these cases had to be reoperated on to recover the appendix. In many of the adherent cases we were able to remove the appendix subserously without damaging the adjacent organs.

It has been my practice to try and get the appendix in all cases unless, by doing so, the patient's chances for recovery were jeopardized.

The first great trick in surgery is a living patient.

A most elegant operation or fine demonstration of one's operative dexterity followed by the

death of the patient don't "bring home the bacon." I have frequently said, the Doctor removed the pathology but the undertaker removed the patient.

The average person is not interested in your diagnosis if you haven't anything to offer him as a remedy for his ills. They pay for something besides diagnosis.

I once had a prominent man in consultation on a case of nephritis. He said, after examining the lady, "it is a case of nephritis, but I don't know a thing about the treatment." We were aware of its being nephritis before he came, and his consultation was really of no value to the patient.

I believe that the appendix should be removed in all cases if it is possible to do it without endangering the life of the patient, and the question of whether to go on and search for it or close without removing it is one that must be decided by the individual operator. After he has had a reasonable amount of experience he is better able to judge what to do and what not to do. It is my opinion that the good surgeon is the one who knows what not to do.

It is easy to say get the appendix in every case, but there are a few cases in one's experience where such a course is ill advised. I once attended a busy clinic where the surgeon had taken out two or three appendices in a few minutes, so the next one I thought I would time him and he had run over 45 minutes without getting it. It was a case with many adhesions and not easy to locate.

I haven't much belief in the saying, "the appendix has sloughed away." I think it should be, the Doctor didn't find it. It is possible for the appendix to slough away likely if one had a gangrenous process which destroyed the whole appendix, but I have only seen one of these cases where there was no appendix, after I had located the place where it should be, and even in this case, there was a stump of an appendix.

To-day I seldom leave a case wide open unless the patient is desperately sick and I only wish to open the belly, (which is full of pus) let out the pus, pour in some ether and pack in a cofferdam under primary anesthesia. In such cases I like to put one stitch on each side, fixing peritoneum to skin, this is done so that when wound heals, (as it does frequently without hernia) you

will at least have peritoneum to peritoneum, like healing to like better than otherwise.

The outer layer of cofferdam is usually left in for ten days, inner strips of iodoform being replaced every second day.

I find, in looking over the cases, that clamps were left protruding from wound in 19 cases.

I discontinued purse string on appendix stump about 12 years ago. Today I ligate stump with three separate ligatures of plain No. 3 catgut and, after swabbing stump with Tinct. of Iodine twice, drop it back without inverting it.

During the past five years I have been in the habit of pushing the omentum away from line of incision just before closing. I believe that intestine is more apt to pull away from incision, on account of the continued peristalsis. and you are less liable to have post operative adhesions.

I also try to evert the peritoneum rather than invert it.

For some time I have used a double row of sutures on the fascia and, if patient is very fat, stitch skin loosely or not at all. After operation is finished the line of incision is given an extra swab of iodine and a piece of cellosilk laid over the line of incision.

DISCUSSION

Dr. D. W. Graham, Chicago, considered the paper as a kind of history of the evolution of the surgeon who started in without experience. But improving his own technique by experience which came to him from year to year, you can see each step of development, from twenty-five years ago down to the present time,—he is a much better surgeon today than he was then. That can be said of almost anybody who is practicing surgery.

We hear a good deal said today about limiting surgery to experienced surgeons. Well, that is ridiculous, as everybody knows. The experienced surgeon had his day of inexperience. We used to graduate, and I guess we do yet, men from the colleges that had just as much license to practice surgery as they had obstetrics or as they had to treat fever or headaches or anything else. Now, the colleges sent them out, and the men connected with the colleges are criticizing these very men for doing surgery. They have been taught under these same men for three or four years, and then they go out and these same surgeons say that these young men haven't any right to do it until they have had more experience.

The grape seeds in the first case he operated on were probably nothing in the world but fecal concretions, shaped sometimes like grape seeds, sometimes like the kernel of a peanut. Yet, of course, you once in a while find a foreign body in the ap-

pendix, but it is so very rare that it hardly needs to be counted.

The doctor's record shows he doesn't attach as much importance to the McBurney point as he used to. Now, McBurney was a great surgeon, but it is a detriment that he ever invented such a phrase as that, or ever allowed it to be used, and I will guarantee he was ashamed of it before he died. As a matter of fact, it should be obliterated and dropped out of medical literature. It has nothing to do with appendicitis, nothing to do with surgery, is no guide to anybody, no help to anybody.

Now, of course, we have all learned a good deal in twenty-five years, Dr. Sala and the rest of us. In the first place, we do better drainage than formerly. Formerly we commonly used a glass drainage tube, and it proved to be one of the curses of surgery. Following the use of that you had fecal fistula, frequently due to the pressure of the inflexible drainage tube.

It is interesting to notice how little gauze is used in the abdomen today in this class of cases, and how little cofferdamming. The doctor still sticks to that, as I understand it, but if he will go a little further, he will abolish that.

Another abomination is the cigarette drain. A cigarette drain will not drain, it blocks the drainage. There is nothing that will give as good drainage as a simple, moderately stiff drainage tube, proper dimensions and proper caliber to suit the case. In the bad cases of pus and septic fluids, if you will introduce just a clear tube, just the right depth, just the right caliber, aspirate that tube once or twice or three times in twenty-four hours where there is much discharge, you will get better drainage than any other possible way that has been devised up to the present time.

Injecting fluids is another thing that makes chills run down my back—to see anybody try to wash out an abdomen with chemicals, with ether or undue swabbing.

What I mean is this—that the evolution of this operation is such that today we have come down to the very simplest steps possible. Some more things need to be abolished before we arrive at this perfect stage, but the whole tendency has been in the way of simplicity of procedure and will be.

Dr. Thompson, Chicago: Of course, you all know that it was through Dr. Murphy's efforts that a good deal of the surgery of the appendix was adopted. If Lee had only written a book on his reminiscences and recollections, it would have been a wonderful thing, because he was a wonderful story teller. He told me many times about his and Murphy's first experience with a real ruptured appendix.

They had opened up appendiceal abscesses several times during the course of three or four years, '89, '90 and '91, but had never been able to see a real appendix in a live state. Unfortunately, they had never come across it in post mortems at the county hospital, where their work was done mostly. So Murphy planned that the next time they were blamed for any one dying after one of these opera-

tions, they were going to see what was inside that belly.

Finally a young boy died following an operation for peritonitis. The people set up an awful howl about the doctors having killed the patient, as was Dr. Sala's experience. That was just what they were looking for. Murphy's resourcefulness came into play. He said, "All right, we killed him; get the coroner." They got the coroner, which was what Murphy wanted, and then Murphy demanded an autopsy. Then they changed their minds because, of course, an autopsy was an abominable thing, but he insisted and for the first time they saw what a ruptured appendix really looked like.

It was a case of general peritonitis with a perforated appendix, but it took a good deal of resourcefulness on his part to find out what it really looked like.

Dr. O'Byrne, Chicago, has not ligated the stump of an appendix for years, but uses a purse string suture of catgut about the base of the stump usually before removing the appendix, sometimes afterwards, and never uses any caustic of any kind on the stump, but inverts the stump and closes that very small opening into the bowel. We have never had hemorrhages, and you never do have hemorrhage unless you invert with the artery of the mesal appendix which you should not do. You never get a hemorrhage from the wall of the bowel or from its mucosa. If there is just a small opening in the bowel which you want to close, tie it up with two or three ligatures and cauterize it with iodine ether. The simplest thing is the purse string suture. After you have crushed the appendix with your forceps, there is absolutely no danger of any hemorrhage into the mucosa or bowel wall. In closing the abdominal wall, it has been years since he has used catgut in the fascia. You always get more reaction around the catgut than you do around a non-absorbable suture. He closes the peritoneum with catgut, a double suture, and then closes the fascia and skin with silk worm gut suture which is removed about the ninth day, and he very rarely has any suppuration in the abdominal walls since he quit using catgut in the fascia. You will go along without suppuration from catgut for many years and then you will have two or three cases that will suppurate when you are using catgut in the fascia all the time.

DR. SALA (Closing Discussion): I want to thank these gentlemen who discussed the paper, especially Dr. Graham. I hadn't a chance to let him look it over until this morning, for I didn't get to finish it. It was more of a job than I thought when I started out on it.

I haven't used a glass drainage tube for a good many years, and I never use a hard rubber tube except in gall bladder work. I like a firm, good, hard rubber tube for that, and possibly in chest work, if I was going to use an ordinary tube—which I never do—but I understand, I think, the reason for not using it.

We call all these things cigarette drains sometimes. My cigarette drains are as big as a sausage, and they are as soft as mush, and I don't think they ever hurt anyone.

The doctor says I will stop using the cofferdam. I don't think I ever will, because I have saved too many patients. I don't use it very often, it is true, but I use it in cases where I want to get in and get out in a hurry. It isn't like stuffing gauze in the abdomen and filling it up. You put your cofferdam in, which consists of two layers of gauze, and in these two layers of gauze four or six strips of gauze are placed. It packs the intestines back, and if you pull those strips out in twenty-four or forty-eight hours, those strips don't interfere with nature's exudate, which is helping to cure your case. The two layers of cofferdam are left for eight or ten days. I don't think I will ever stop using the cofferdam drainage in certain cases. I don't use it quite like I used to. I sew up my cases a good deal more than I used to.

Dr. Graham said something about washing out the intestine. I never do unless I have a belly full of fecal matter, and a man is a chump that wouldn't wash it then. I do pour in ether, but I don't pour it in to wash out the cavity. If you have never used ether, you should use it to see what it does. You put it in some of those pus cavities and there is no more pus—it absolutely stops it.

I had a case of a man with a quart of pus. I dumped out the abscess and wiped it out and then poured that abscess cavity full of ether. I don't think that fellow discharged a tablespoonful of pus during his convalescence. I read about that several years ago and I thought then I would use it some time, but I never did do it until I saw Will Mayo putting it into an abdomen one day, and I began to use it after that. It really is a very good thing, and I would recommend to any of you to pour ether right into your pus cavity.

In answer to Dr. O'Byrne's criticism about ligating the stump, I stopped using the purse string suture ten or twelve years ago just simply on account of hemorrhage. You say you don't get a hemorrhage, but if you will get one then you will quit. I have seen no harm coming from the appendix being ligated, and the reason I put three strings on is because one may slip. I have often said that I put one on for the anesthetizer and one for the assistants and the last one for myself. I have had no trouble since I have been ligating the appendix.

As regards sewing up the abdomen, I also stopped using silk worm sutures in the abdomen about ten or twelve years ago. I can't see any particular advantage in them. I do do this, however—I sew up my fascia with two or three layers of catgut suture, I go up and down with the continuous suture. I go up and back again, and I don't care if the rest of the wound does come open if I get my fascia healed, I am not going to have any hernia.

THE NEED AND VALUE OF STRICT ENFORCEMENT OF NOTIFICATION IN CASES OF SUSPECTED AND DIAGNOSED PULMONARY TUBERCULOSIS*

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The purpose of this paper is to emphasize the inherent advantages both to community and physician of early reporting of suspected and diagnosed cases of pulmonary tuberculosis. A firm determination on the part of health officers to secure this early notification is a public health step that will go far, first to secure better control of tuberculosis at the sources of its first appearance, when it begins to infect new soil, and second, it will do much to promote earlier clinical recognition of the disease. Incidentally, this latter will serve to answer the prayer of sanatoria superintendents that cases in the earlier curable stages of the disease be sent to them rather than the hopelessly advanced, which now constitute the bulk of admissions to our public institutions in such enlightened states as Massachusetts and Illinois. A plea is made that tuberculosis be treated in the same manner as the acute contagious diseases, as far as notification is concerned, inasmuch as it causes a greater degree of mortality and morbidity.

In Illinois we are indeed fortunate in having already in force rules and regulations which mark our commonwealth as one of the most progressive in the fight against the "White Plague." Compulsory notification has the authority and sanction of the law behind it. Rule 1, of the Rules and Regulations formulated by the State Department of Health for the control of Tuberculosis, reads as follows:

Rule 1.—"Reports." Every physician, attendant, parent, householder or other person having knowledge of a known or suspected case of pulmonary tuberculosis must immediately report same to the local health authorities.

The powerful instrument of compulsory notification is at hand. It needs only courageous and vigorous use to insure the most brilliant results. These results in my opinion, will be greater than anything to be hoped for from the

less impressive traveling exhibits, lectures and other means of educational propaganda that in most cases get no farther than children and a very small percentage of adults. Compulsory notification with its correlated follow-up work, is the agent which reaches into the hot beds of disease and leads to the instillation of timely knowledge in an emphatic and systematic way. Right standards of living are indissolubly connected with reduction in tuberculosis. Compulsory notification tends to render these standards obligatory in the community instead of merely optional.

It is rather well known that tuberculosis has been lagging in the decline which has been marking the course of contagious diseases in the past decade or two. This would tend to question seriously the efficacy and adequacy of the special methods and activities hitherto employed for its conquest. William Charles White, in the 1913 National Association Transactions, states "We cannot possibly avoid the facts that in spite of all our labor, our results are not what we might have expected on a right premise; for our reduction in morbidity and mortality from tuberculosis has not kept pace with the reduction in the general death rate; and further, our reduction in mortality was about as great before we started our present methods, and in proving how great the influence of our efforts has been, we usually neglect all the influences that operated before we began."

Craster in a recent article published in the *Journal A. M. A.* states:—

"It may be said that in spite of the great decreases recorded in the mortality from tuberculosis in the registration area, the disease must still be prevalent to a degree resembling the wide spread epidemics of contagion of earlier days. In spite of intimate knowledge it is evident that our empiric methods have so far failed. Tuberculosis, 'lingering like an unloved guest,' by its very perversity calls for our utmost efforts for its eradication."

Frederick Hoffman, Statistician of the Prudential Insurance Company, has clearly demonstrated that the decline in tuberculosis since the introduction of special methods for its reduction has been no greater than before their use.

Much color and basis exists for these pessimistic conclusions, when we read the United States Government report on the deaths from tu-

* Read before the Seventieth Annual Meeting of the Illinois State Medical Society, at Rockford, May 19, 1920.

berculosis during the past three years. The figures are as follows on deaths from this disease in the registration area.

1916	.....	141.6	per 100,000 population.
1917	.....	146.4	per 100,000 population.
1918	.....	149.1	per 100,000 population.

Since the promulgation in 1917 of the State Rules and Regulations dealing with tuberculosis, an earnest and unrelenting endeavor has been made in Chicago by the present health commissioner, to have all diagnosed and suspected cases promptly reported by each physician in turn who sees professionally a case of pulmonary tuberculosis either as family physician, consultant, or in any other special capacity. If symptoms are present which to a reasonable and liberal degree suggest tuberculosis, that case is considered to come under the category of "suspected case" referred to in the rule just read.

It may be of interest and value to give in detail the method of follow-up which is instituted in Chicago following each report of a case of tuberculosis. All such reports are handled by the Municipal Tuberculosis Sanitarium, which is empowered to conduct the tuberculosis activities of the Health Department.

When a suspected case is reported, communication is opened with the notifying physician, who is asked if circumstances are such that the patient will continue under his supervision and report to him regularly for periodic examination. He is also requested to send a specimen of the patient's sputum to the health department as required by Rule IV of the afore-mentioned State Regulations. If the physician states that he will see the patient periodically, a call is made by a tuberculosis visiting nurse after the lapse of five or six weeks. She is instructed to ascertain whether the patient is in fact reporting to his physician or not, and if sputum has not already been sent to the health department to arrange to procure it. These visits are made at intervals of six weeks or two months, till a diagnosis of the case is reported by a physician.

If the patient does not return to his physician, or to some other physician, he is tactfully informed that the health department rules require a suspected case of tuberculosis to be under supervision by either a private physician of his own choice, a private dispensary or one of the Municipal Tuberculosis Dispensaries of which there

are eight conveniently located so as to serve best all sections of the city. Probably seventy-five per cent. of these cases will elect to return to their private physicians. Right here allow it to be said that many a procrastinating, ignorant or careless individual is kept in sight, who might otherwise turn up later in an advanced stage of the disease. Through sputum examination at this juncture many an open case is detected and prevented from disseminating infection to his family and others.

If the reporting physician on being communicated with states that circumstances are such that he cannot follow-up the suspected case, the visiting nurse calls and presents to the patient the necessity of being examined further, either by a private physician or at a dispensary if he cannot afford the services of a private physician. Repeated refusal to cooperate after a number of visits have been made by the nurse and her supervisor and refusal to be examined in his home by a physician from the nearest municipal dispensary results in his home being placarded just as would occur if the patient were reported as having suspected scarlet fever or diphtheria and refusing a determination of his illness. This is seldom necessary as most individuals are made to see the benevolent purpose of the interest taken by the Health Department in their illness.

If the case reported is recorded as a diagnosed case, it is ascertained whether the physician is to continue the medical supervision or not. This specific inquiry is made because many cases are reported by insurance examiners, industrial physicians and other types of doctors who do not intend to treat the cases. In this instance, the nurse ascertains if patient is under treatment any place. If lack of funds to see a private physician is pleaded, insistence on dispensary observation is made. Sputum is obtained from time to time if not already sent to the laboratory. At this point it should be said that the nurse is often of great assistance to the family and physician in helping to settle many problems that arise. Sometimes she places the family in touch with societies and agencies that will help the family while the mother or bread winner is taking the cure at a sanitarium. At times many a partially arrested case is stayed from disregarding the advice of his physician and returning to work prematurely and in an unfavorable environment.

If a patient, who has been diagnosed as tuberculous by one physician, consults another who tells him he is non-tuberculous, the latter diagnosis is not accepted by the Health Department unless two physicians make a formal report to this effect, one being preferably a physician known to do special tuberculosis work. The reporting of a case often prevents it falling into the hands of less competent or unscrupulous physicians who from one motive or another assert a different diagnosis, perhaps to belittle the first physician or to cater to the desires of the patient or his family who wish no mention made of tuberculosis. Many a gullible person is saved from extortion and poor or useless treatment by quacks who cannot operate so well when a public health nurse is an occasional visitor.

The plan of procedure just given benefits the physician from a scientific and economic standpoint. The follow-up work tends to procure the cooperation of his patients. In the public dispensaries an effort is made to have patients keep under private supervision wherever this is not a hardship for them to do. It benefits physicians in yet another broader way. Physicians have said that the interest taken by Health Department in tuberculosis has led to a corresponding interest in the public. More people present themselves for examination for possible early manifestations of tuberculosis. Minor ailments are given more consideration.

The number of cases reported by private physicians notwithstanding the declining death rate, is constantly increasing as shown by the statistics of the Municipal Tuberculosis Sanitarium. During the first four months of 1919, 1,232 new cases were reported by private physicians. This compares with 1,331 during the same months of this year, an increase of 99 cases. During the same period there were 1,268 deaths as compared with 1,051 in 1920—a decrease of 217.

Since the Municipal Tuberculosis Sanitarium started to enforce the notification of tuberculosis each month has shown an increase in the number of cases reported.

It is regrettable to say that measures out of the ordinary had to be taken to compel physicians to heed more carefully and generally the State rules and regulations in the matter of reporting their suspected and diagnosed cases. After these rules and regulations had been promulgated the entire medical profession was informed several

times by letter and pamphlets of the new requirements. This had a seemingly slight effect. Physicians still continued to sign death certificates stating they had attended the deceased for months, no record of the case being in the files of the health department. Cases were continuing to come to the dispensaries in a far advanced state after passing through the hands of a number of physicians, not one of whom had reported the case.

Hence it was decided that something more emphatic than printer's ink had to be used to secure compliance with the law and incidentally to check wholesale infection of children and constantly recurring crops of open cases. It was resolved henceforth to send to each physician on his first violation, a letter concerning his non-compliance in a particular case, together with a copy of the State rules for his future guidance. On second violation he was to be called before a hearing board, consisting of an attorney from the city prosecutor's office, the chief of the quarantine department and several members of the Staff of the Municipal Tuberculosis Sanitarium. The tribunal was to be chiefly educational and not disciplinary. He is again apprised of his short comings and the need and value of reporting his cases is pointed out to him aside from the mere technical legal misdemeanor. A third violation calls for prosecution in court. In but very few cases was it necessary to go to this extreme.

Instances of violation of the State rules are discovered through examination of death certificates and from the history of the past treatment of advanced cases coming to the municipal dispensaries. Cases reported to the Health Department in an advanced stage are also investigated for inexcusable delayed reporting.

Since the introduction of these measures reporting by private physicians of suspected and diagnosed cases has been more general and earlier. The number of physicians who continue to treat cases of tuberculosis for months and months and report their cases only shortly before death, or when they are about to go into the hands of others, is rapidly decreasing.

It is not far fetched or illogical to conclude that compulsory notification of suspected and diagnosed cases of tuberculosis is a public health measure of transcending value in achieving the conquest of tuberculosis. It justifies health

authorities in taking whatever action is necessary to secure this notification.

It operates in the interest of public health by leading to the detection of an increased number of open cases and to their hospitalization or proper quarantine—one big avenue of attack against tuberculosis. It enables us to know the approximate number and location of the enemy which is of the utmost importance for success in any kind of warfare.

It leads to earlier diagnosis and earlier scientific treatment which is the other avenue of attack used in the successful Chicago Campaign against the "White Plague."

TREATMENT OF SOME PELVIC INFLAMMATIONS*

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Pelvic Inflammation, acute or chronic, applies to inflammation in the pelvis outside the uterus.

We will discuss chiefly the gonococcal infections with a few remarks on the pyogenic infections.

To operate during the acute stage of pelvic inflammation is most unwise unless pus is present and can be drained without exposing the peritoneum to infection.

Delay in operating for gonorrhœal pelvic inflammation is rarely dangerous as such cases tend to become chronic. The first attack is seldom fatal.

Put the patient to bed in the Fowler position, employ gastric lavage and allow nothing by mouth, not even water, in the severe cases. We condemn the use of cathartics, relying on oil enemata and cleansing enemata and later liquid petrolatum by mouth when able to partake of liquid diet. Apply large hot moist dressings to the abdomen, endeavoring to keep them at as near 110° F., as possible. We have found the electric pad very serviceable in that respect.

Give the Murphy drip, adding bromides or mild sedatives as necessary for comfort. Codein or morphin are used only if necessary for pain. We frequently substitute the glucose and sodium bicarbonate solution (one-half ounce of each to one pint of water) where the drip must be main-

tained for over forty-eight hours. We have not found it necessary to give rectal feedings.

Use frequent large hot vaginal douches raising the temperature of the water gradually and much hotter solution can then be borne. Use no force and give the douche slowly. Cold douches and cold abdominal packs are used by some. We have preferred the hot applications although the ultimate effect may be the same.

Make as few pelvic examinations as possible, and then be gentle as there is always danger from trauma.

Much of the foregoing may seem trivial, but it is nevertheless important to pay attention to the little details, if one expects to attain good results in the treatment of acute cases.

More extensive lesions follow the more severe attacks and in those cases of long duration or those in which there have been repeated attacks salpingitis, pyosalpinx, hydrosalpinx, peri-oophoritis, oophoritis, tubo-ovarian abscesses and tubo-ovarian cysts result. Adhesions are almost constantly present in greater or less degree. Both sides may be involved similarly or there may be one type of lesion on one side and another on the other. The pathology may all be confined to one side. However, one rarely finds a normal tube on either side after several recurrences of acute pelvic peritonitis.

The gonococci become attenuated and are frequently destroyed in the great majority of cases in from two to four months. They may survive for years in exceptional instances. The pyogenic cocci retain their virulence very much longer than the gonococci. Some writers point out that a few cases are cured by the palliative treatment, but we must consider the majority of patients who have been through an acute attack of pelvic peritonitis as essentially surgical although there is undoubtedly an approach toward normal. It is this tendency toward resolution, and the fact that gonococci later became innocuous, that should lead one to defer operation for at least two to four months. One can readily see what this means. The operation can be performed with greater ease. There will be fewer infections, fewer adhesions and fewer herniae, as drainage in the incision proper will not be necessary. Post operative peritonitis usually results from too early operation. Thus the mortality will be reduced by late operation.

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If, during the acute stage, pus is present it should be drained extraperitoneally. Carefully determine the position of the uterus, make an incision behind the cervix and dissect upward to the abscess. Drain with soft split rubber tube. Streptococcal abscesses are usually located in the connective tissue and sometimes cannot be reached by the vaginal route. They must then be drained by the extraperitoneal operation above Poupart's ligament. The above procedures may be followed in those cases with alarming symptoms where there is no definite abscess, but a mass formation which is becoming increasingly tender and larger. The same applies to virulent cases of pelvic peritonitis. Abdominal section for streptococcal infection is attended by the gravest danger, a severe general peritonitis being frequently set up.

After the acute attack endeavor to build up the patient's health. Some writers advocate the open air treatment during the acute attack. Get the patient into the open air at least after the second or third week provided the temperature and pulse are normal. Give tonics, continue the douches, and insist on rest during menstruation. Tampons *may* be used, but great care should be exercised in applying them. If used too early they may do more harm than good. Advise strongly against sexual intercourse.

We recommend to our patients the use of liquid petrolatum for the bowels as fecal accumulations will only be an added irritation to the pelvic inflammation.

If there is a recurrence of the acute symptoms the patient should again go through the course of treatment outlined.

The abdominal operation is best put off for from two to four months after the acute attack. The temperature should remain normal. Operate at least one week after menstruation as more micro-organisms are present in the discharges at and immediately following the period. Infection is then less likely to occur. It is possible that hemorrhage may be more difficult to control if the patient is operated on during the menstrual period and it is of prime importance to have good hemostasis when operating on cases of pelvic inflammation. Blood clots and blood serum would make good culture media if there were any organisms present.

The operation of salpingostomy has been performed many times, but has not been attended with good results and should only be performed

in exceptional cases. It is dangerous to attempt conservation of a tube in the presence of infection. Very rarely one finds a healthy tube with the other diseased. Such healthy tubes may be saved, but even then the apparently normal tube may subsequently become infected.

Patients with diseased tubes are usually sterile. Salpingectomy should therefore be performed and a wedge shaped portion of the uterine cornua removed. Failure to carry out the latter step has resulted in the formation of cornual abscess.

Before operating for ovarian disease consider the age of the patient and her temperament. Inquire into the number of children and if she has none ascertain just how earnestly she desires offspring.

Women who must support themselves and families by hard work will usually leave the type of operation to their surgeon. They must have their health and half way measures cannot often be considered. They cannot afford to be invalids, to be under treatment, or submit to more than one operation.

Following a double Oöphorectomy, the patient is subjected to the psychic effect of cessation of menstruation. The trophic influence of the ovaries is lost. Pregnancy is no longer possible. Many women become definitely neurasthenic. For these reasons ovarian conservation should be practiced in part at least. We cannot conserve in all cases.

We can conserve many ovaries in cases of peri-oöphoritis by removing the offending tube. The ovary will then frequently undergo resolution.

Oöphoritis occurs in the cases of longer standing. Such ovaries ordinarily cannot be conserved as the important tissues are virtually destroyed. Ovarian abscesses should be excised. Small ovarian cysts can be punctured and the larger ones removed. Remember that an enlarged ovary is not necessarily diseased.

When endeavoring to conserve an ovary after salpingectomy or after partial excision of the ovary be particularly careful not to interfere with the ovarian blood supply or cystic degeneration will follow. It were better to remove the ovary at once than subject the patient to a second laparotomy.

Conserved ovaries should be suspended without putting tension on the tissues or here again there will be interference with the blood supply.

A large percentage of failures in operating on

cases of pelvic peritonitis can be attributed to failure to provide against ovarian prolapsus. The uterus is almost invariably found in a posterior position and should be brought forward and the round ligaments shortened. We have performed ventral suspension in addition in many cases, believing that it temporarily takes a sufficient amount of tension off the round ligaments to allow them to become firmly united in their new position.

Ventral fixation occasionally is performed where the operation has rendered the patient sterile.

We will not go into the subject of ovarian transplantation other than to say that so far the results are not over gratifying. If one can be satisfied with a therapeutic effect of from six months to one year, then well and good. The transplants usually atrophy or become cystic within the stated time.

Where pelvic inflammation has so far progressed that hysterectomy is required, it is usual to remove both ovaries, as they will be found so diseased that conservation is not to be considered.

We believe, however, that if the expectant treatment of acute pelvic inflammatory disease is adhered to and the after treatment followed up that the number of radical operations will be decreased, the operative mortality will be reduced, and fewer neurasthenics will be returned to the general practitioner.

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BLOOD TRANSFUSION IN THE NEW BORN*

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When such conditions as hemophilia, internal hemorrhages or severe anemia from unknown causes appear in the new born, the treatment that should be instituted is blood transfusion.

This procedure is usually looked upon as requiring a great deal of skill and special instruments and consequently, where large hospital facilities are not available, is not performed as frequently as in the large medical centers. I desire to describe the indirect method of blood transfusion, which produces the same results as

the direct method, and can be performed by any physician having the average amount of surgical skill, and in the private home if necessary. The instruments necessary for the operation are:

2 aspirating needles of about 18 gauge to be used for the donor.

2 aspirating needles of about 20-21 gauge to be used for the recipient (2 needles should always be on hand in case one becomes plugged.)

1 graduate.

1 glass rod.

1 graduated glass cylinder (similar to what is used in salvarsan injections).

1 small scalpel.

1 pair fine tissue forceps.

Several small artery forceps.

1 pair scissors.

Several cutting needles.

Ligature carrier.

Catgut No. 00.

Silkworm gut.

2.5 per cent. sodium citrate solution.

Normal saline solution.

Rubber tubing tourniquet.

Technique. In the new born the donor is usually the mother or father for which blood the hemolysis test is not necessary. The median basilic vein of the donor is entered with the aspirating needle and about 100 c. c. of blood is collected in the graduate, in which 5 c. c. of the citrate solution is first added and then 5 c. c. more after 50 c. c. of blood has run in. Constant stirring of the mixture with the glass rod is done by the assistant. An incision in the bend of the elbow of the infant is made after a tourniquet is applied to the upper part of the arm, which incision should be at least $\frac{1}{2}$ inch long and extending about 1 cm. above the bend of the elbow. By careful dissection the vein is isolated, and the needle inserted into the vein in the upper part of the wound as here the vein is largest in diameter. The largest gauge needle that will enter the vein should be used, as the distension of the vein by the needle renders the freer flow of the transfused blood. The tourniquet is now removed from the arm. From the graduate cylinder normal saline is first run into the vein after all air in the apparatus has been expelled, and when it appears that the saline is running freely into the vein, the blood is poured into the cylinder. During the transfusion the infant

*Read before the Stockyards Branch of the Chicago Medical Society, December 9, 1920.

should be watched for an acute dilatation of the heart. After the transfusion the vein of the baby is ligated and the skin wound closed with silkworm gut.

Conclusions. There are several important steps in the operation, namely, making the incision high enough in the arm of the baby and using a needle large enough to distend the vein and permit free flow of the blood.

The external jugular vein and the longitudinal sinus entered through the anterior fontanelle is sometimes used to transfuse the blood into, but this complicates the operation as compared to the arm transfusion.

The results obtained by blood transfusion are on the whole very satisfactory in the new born.

I desire to make it clear that I do not claim originality for this method of transfusion, but desire to call attention to its marked simplicity, and its remarkable results, and urge the more frequent use of it.

ANGINA PECTORIS—A SURVEY OF TREATMENT WITH A NEW REMEDY—BENZYL BENZOATE

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In seeking an etiologic therapy for angina pectoris, we find ourselves confronted by a task of no small proportions. Oftentimes the most we can hope to do is to modify conditions, if possible, and relieve the sufferer of his agonizing pain. When we remember that the most frequent and best understood causes of angina pectoris are organic changes in the aorta, and the aortic valves, which result in stenosis of the coronary arteries, we can readily comprehend with what great difficulties the solution of this problem is surrounded. This disease is of historical interest. Jno. Hunter, Nothnagel, and Thomas Arnold of Rugby, died of it. Nothnagel penned his own sensations almost to the last.

Angina abdominalis is sometimes found in association with angina pectoris (angina pectoris et angina abdominalis.) The symptomatology is so similar to grave abdominal disease that diagnosis is exceedingly difficult, if not impossible. Surgical interference is sometimes resorted to with serious consequences. This last is a recent personal observation.

The nitrites as remedies for this disease were first brought to the notice of the profession by the late Sir Lauder Brunton. They are quick acting vaso-dilating remedies, reducing pressure and relaxing tensions, thus relieving pain. I remember many years ago, during my hospital internship, a man was brought in on a stretcher in a half conscious condition, clutching at his throat with one hand and with the other at the region of his heart. The administration of amyl nitrite was like pouring oil on a tempestuous sea. Immediate relaxation and complete alleviation of his suffering followed.

Gordinier¹ presented a paper on angina pectoris at the 20th annual meeting of the American Therapeutic Society at Atlantic City, June 6 and 7, 1919. In this thesis he entered thoroughly into the etiology, pathology, symptomatology and treatment of this disease. This paper is deserving of more than a passing notice and should be read in its entirety for its full appreciation. He emphasizes the necessity for thorough study of the heart and blood vessels, kidneys and digestive system, and blood pressure. Habits, diet, sleep and exercise should have searching and careful attention. Exercise should be limited to walking on the level. For the paroxysms he regards the nitrites as almost specific. At the onset he uses amyl nitrite and quickly follows with nitroglycerine. If relief does not come at once from the nitrites, morphin and atropine should be employed without delay. Inhalations of chloroform are to be resorted to when other remedies and measures fail. The iodides, he regards, as of unquestioned value, administered over a long period of time, and cases of luetic history should have their appropriate treatment. It should be noted here and in this connection that sudden death coincident with the administration of morphin or chloroform for the relief of the paroxysms of angina pectoris may become a trying and exceedingly embarrassing situation. This experience fell to my lot ten years ago, and like Banquo's ghost, "will not down," and rises to caution me when called upon to administer morphin for the relief of human suffering from any cause.

Hall² in a paper read before the Medical Society of London, October 13, 1919, discusses the treatment of angina pectoris with low blood pressure. He was impressed by the failure of the drugs usually employed to give relief in these

cases, and was convinced that a fatal termination might be accelerated if vasodilators were incautiously administered. The prognosis, always grave, was distinctly worse when anginal symptoms occurred in patients with low blood pressure. The failure of the nitrites to give relief of anginal pain was a bad omen, for it indicated myocardial degeneration and a tendency to death by sudden heart failure. He maintains that indications of a failing myocardium, as feebleness of the impulse, a feeble first sound at the apex, low blood pressure, a feeble, infrequent pulse, dyspneic attacks, and signs of commencing edema of the lungs, were of very grave prognostic import, that these cases required a stimulating plan of treatment, and that vasodilators were useless, if not dangerous.

According to Lauder Brunton⁸ in the case of nitrite of amyl and other nitrites, the dilating center in the medulla appears to be affected first, so that the dilatation is of twofold origin, central and peripheral.

Shortly after its publication in 1918, Dr. David I. Macht⁴ of the Pharmacological Laboratory of the John Hopkins University, very kindly sent me his report on "A Pharmacological and Therapeutic Study of Some Benzyl Esters." He divided their actions as follows:—1. on smooth muscle; 2. on the circulation; 3. on the respiration; and 4. on the central nervous system. He contended the action of benzyl benzoate, on smooth muscle structures is the most striking, from a pharmacological point of view, and most important from the clinical. This ester tends to inhibit peristalsis, or the rhythmic contractions of smooth muscle organs, and to lower their tonicity, and to relax their spasm. He concludes the action on the circulation is exerted chiefly through the peripheral mechanism, a fall of blood pressure being due to its action on the smooth muscle of the arterial walls. The effect on the vasomotor center, after ordinary doses, is negligible and unimportant. The action of benzyl benzoate on the heart is sedative, but not depressant. Perfusion of isolated mammalian hearts with small amounts of benzyl benzoate seemed to increase their tonus.

The heart muscle has a place midway between smooth muscle and voluntary striated muscle. The endocardium is a connective tissue membrane which contains smooth muscle and elastic tissue fibres. The media of the aorta contains

a great many membrane-like masses of elastic tissue and thick elastic fibres. Between these are bundles of smooth muscle fibres.

Poynton⁵ says the pain has been variously ascribed to cramp of the heart and neuralgia of the cardiac nerves, but agrees with Allbutt⁶ who gives the first part of the aorta as the location of the pain of angina pectoris, and emphasizes its distinctions from the usual forms of cardiac pain.

In the light of the above review, the following histories are submitted for careful and critical consideration.

Case 1. Male, 53 years old, of powerful, close-knit build, consulted me April 16, 1918. He gave a definite history extending over a number of years of severe, agonizing anginal attacks; often, as alleged, as if his body were torn asunder. He had consulted other physicians, who, of one accord, diagnosed his case as angina pectoris major; one telling him he was liable to drop dead any moment. In a written communication to me, he offers the following as descriptive of his own sensations: "I suffered at times with terrible pains through the whole front of my chest. These pains would shoot through the chest to the back and into the left and right shoulder blades, and down through the arms to the wrists. My arms would ache and become numb, and this sensation would be followed by a violent palpitation of the heart, and a sense of suffocation. These pains would last from three to ten minutes, and if I was outdoors walking, I would have to stand still until they eased up. I first noticed these pains about the year 1914, and each year the attacks grew more severe and painful and lasted longer, so that I could not walk more than a half a block, when I would have to stop because of these severe attacks." Nitroglycerine gave but slight relief. Amyl nitrite produced some relaxation, but the after effects were decidedly distressing and depressant. The clinical history and physical examination gave evidence of marked myocardial disease; a weak systolic impulse was noted, while an extra systole at every fourth to tenth beat was in evidence. The blood pressure was low, systolic 100, diastolic 75. Urinary findings were negative, except under the microscope a few hyaline and granular casts. On July 5, 1918, I prescribed benzyl benzoate, 25 drops of a 20 per cent alcoholic solution, to be taken in water at intervals of every four hours. He reported the following day, saying he felt perfectly well, and that he had walked without discomfort a distance of twelve city blocks. This case has been under observation for two years. Frequent blood pressure determinations always showed a low pressure. Urinary findings as at the beginning. He has had several attacks of pulmonary edema. Twice he has had influenza. Benzyl benzoate has always given relief from his anginal attacks, and has never lowered his pressure to an unfavorable degree. This case,

as remarked above, is one of evident myocardial involvement, and has been much benefited by the use of digitalis. Arsenic combined at intervals with iron and strychnine has been of decided service.

Case 2. Male, and at the time of the first consultation, 61 years old, manager of large insurance company whose duties are manifold and exacting. He gave the usual history of a sufferer from severe angina pectoris. The physical examination disclosed some cardiac hypertrophy with strong systolic impulse, and also occasionally some intermittency. The urinary findings were negative except hyaline and granular casts. Blood pressure at the first examination, systolic 200, diastolic 110. His paroxysms were frequent and of the greatest agony. The nitrites gave relief and would secure a temporary reduction in pressure. On July 9, 1918, he was placed on an alcoholic solution of benzyl benzoate, 25 drops in water every four hours. Occasionally a tablet of nitroglycerine 1/100 gr. was employed in emergency when quick action was desired. Weekly observations of his case have been made since. The use of the nitroglycerine has long since been disregarded. He remains entirely free from pain and is able to make extended trips throughout the country in the interest of his business. Recently his blood pressure was, systolic 150, diastolic 90. It is interesting and instructive to contrast this case with the preceding one. On the first examination of the first case the systolic pressure was 100; the second, the systolic pressure was 200; weak systolic impulse of the first, powerful systolic impulse of the second. Their subjective symptoms ran almost parallel. During these two years the systolic pressure of the first rarely could be brought above 100. The nitrites in his case were not well borne. There was need of frequent resort to the use of digitalis. Benzyl benzoate always gave prompt relief from his agonizing pain. In the second case, the nitrites were well borne, but evanescent. There never has been any need of digitalis in his case. His pressure has gradually become lower. Benzyl benzoate always gave prompt, complete and prolonged relief. Both have been seen recently, and both have expressed themselves as comfortably well. The need of the remedy now is rather infrequent.

Case 3. On February 18, 1920, I was called to see a man 61 years old, whom I have known for many years, and in whom two years previously symptoms of a chronic nephritis of a hyperpetic type became manifest. During this interval I had not seen him professionally. On this date I found him sitting on the edge of the bed in his own home, in a rigid attitude. He had had nitroglycerine with some modicum of relief. He was still in great agony. His blood pressure was, systolic 235, diastolic 125. Benzyl benzoate in a 20 per cent alcoholic solution was prescribed for him, 25 drops in water every four hours. He has been seen at weekly intervals since. He has obtained complete relief. His pressure at the last determination was, systolic 168, diastolic 100. He was placed on a moderately low protein diet and his habits

of life otherwise regulated. He remains entirely free from pain, and is able to take full charge of his business affairs, which a few months ago his agonizing affliction threatened to cut short.

Case 4. Housewife, 43 years old, and the mother of three children consulted me on May 18, 1920. Ten years previously on my advice she had an appendectomy performed. This was done by the late Dr. Alex H. Ferguson. From this she fully recovered. From that time on she enjoyed good health until the latter part of December, 1919, when she began to suffer agonizing substernal distress, always made worse by effort. This distress has gradually increased in severity, so that on one occasion while out she thought she would not live to return home. The sensation as she described it was "as if a heavy weight was crushing in her breast bone." Physical examination revealed nothing distinctive. Urinary findings were entirely negative. Blood pressure was, systolic 110, diastolic 75. Twenty-five drops of a 20 per cent alcoholic solution of benzyl benzoate were prescribed for her, to be taken in water every four hours. No other medicine was given and no change of habits or diet was ordered. She reported three days later, and remarked that on one day she was able to do a three-hours' family ironing with a marked degree of comfort. She is an intelligent person and auto or other suggestion would not modify or change her opinion. When the question was asked whether she did or did not receive benefit from taking the remedy the answer was positively in the affirmative. The blood pressure was 110, the same as at the beginning. This case has been under observation too short a time for further comment. Since writing the foregoing she has been seen on two occasions. The blood pressure remains as heretofore, and the improvement in her subjective symptoms continues.

Case 5. Female, aged 70 years, in a condition midway between severe and mild. Chronic hypertension. She has been under observation for about seven years. Relief, as a rule, quickly followed from the use of the nitrites. About five years ago she had what appeared to be a hemiplegia of the right side, perhaps due to arterial spasm. From this she recovered. During the last eighteen months she has been on benzyl benzoate, and has obtained continued and prolonged relief from the anginal pain and lowering of her blood pressure. She is able to perform her household duties.

Case 6. Male, aged 73 years. Case mild. Comfortable under the use of benzyl benzoate.

Case 7. Male, aged 68, similar in symptomology to the preceding. In addition, he had a mild intermittent claudication. General arterial sclerosis was in evidence. He obtained relief from the use of benzyl benzoate. He has not been seen recently.

One case of severe intercostal neuralgia of the left side, on first examination seemed to be a severe angina pectoris. I prescribed benzyl benzoate in the hope of giving relief, but without effect. Two cases of pylorospasm, thought at first to be angina pec-

toris, obtained complete relief from the use of benzyl benzoate.

Comment. Following the presentation of his paper on The Clinical and Therapeutic Value of the Benzyl Esters, before the section of Pharmacology of the American Medical Association at Atlantic City, June, 1919, Dr. Macht was asked if the continued administration or use of benzyl benzoate might not lower the blood pressure to an unfavorable or dangerous degree. The answer was naturally in the affirmative if the administration should be continued over an extended period of time. In Case 1 of my series whose blood pressure was low at the beginning, this in truth would be thought the logical and expected sequence. In very fact this has not taken place. His blood pressure has been determined at frequent intervals before taking the remedy and after taking it, and it has rarely varied from 100 to 110. The patient has repeatedly expressed himself that a feeling of comfort and well being always followed its use. It is altogether probable that further experimentation and observation may be necessary to determine the precise status of this question, why in cases of hypertension the pressure is lowered and those of normal or low tension the pressure is not especially influenced.

The cases of pylorospasm noted in this series were of normal pressure. No lowering of the pressure was noted in these cases from the use of the remedy. Perhaps it is because its action is upon the smooth muscle cell itself, and not centrally, and in angina pectoris it is highly probable the beneficial effects of benzyl benzoate are due to the antispasmodic and sedative action on the coronary arteries. The tonus of the heart is improved.

The nitrites act upon the medulla first and the vasomotor mechanism almost immediately. They are useful in case of hypertension and are not well borne in cases of low pressure, if not positively dangerous. The action of benzyl benzoate is slow, but prolonged and complete. The action of the nitrites is rapid, the effect passing off much more quickly. A feeling of exhilaration and buoyancy attends the use of benzyl benzoate. This cannot always be said of the nitrites.

In the lowering of the pressure of the hypertension cases, it must be added, the regulation

of the diet and habits of the patient contributed not a little.

In this connection it is fitting that more than a passing notice should be given to the question of diet. Much has been written in recent years, and not a little confusion prevails in the minds of the medical profession as to what should constitute a proper diet in health and what in disease. It has long been conceded that large quantities of food and drink daily consumed contribute in a large degree to precordial and stenocardial distress. It is easily conceivable that a person of fifty or sixty pounds or more overweight is taxing severely his circulatory powers in carrying this extra burden. When patients who are overweight are reduced to a weight in proportion to their height (according to Moschcowitz⁷ the conventional tables for normal weight in proportion to height are altogether too high) much will have been accomplished towards their comfort and restoration to health. Some patients need an extra nourishing diet as was necessary in two cases of my series.

Hall, in the article above quoted, remarks, among cardiac tonics no drug is so generally useful as arsenic. It is sometimes combined with iron if the patient is anemic. Oftentimes strychnine is added to improve the tone of the patient. Case 1 of this series has received arsenic in some form almost continuously throughout his treatment. Also in this case a capsule of powdered digitalis leaves (Allen) gr. 1½, with powdered ipecac, gr. ⅛, was of frequent use and benefit. And finally benzyl benzoate is to be considered as a symptomatic agent and not as a cure. The remedy in alcoholic solution diluted with water was well borne by the stomach, and no deleterious or by after effects were noted from its prolonged used.

30 North Michigan Boul.

REFERENCES

1. Angina Pectoris, H. C. Gordinier, Medical Record, Oct. 4, 1919.
2. Angina Pectoris, F. DeHaviland Hall, British Medical Journal, Oct. 18, 1919.
3. Therapeutics of the Circulation, Lauder Brunton, London, 1914.
4. A Pharm. and Ther. Study of Some Benzyl Esters, D. I. Macht, Jour. Pharm. and Exp. Therapeutics, Vol. No. XI, No. 6, July, 1918.
5. Heart Disease and Thoracic Aneurysm, F. J. Poynton, London, 1907.
6. Diseases of the Arteries, Including Angina Pectoris, T. C. Allbutt, London, 1915.
7. The Treatment of Hypertension, Eli Moschcowitz, Am. Jour. Med. Sci., April, 1920.

BLOOD TRANSFUSION IN THE TREATMENT OF PULMONARY TUBERCULOSIS*

A Preliminary Report

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A resumé of the literature indicates that there has been little advance in the treatment of pulmonary tuberculosis since the discovery of the bacillus tuberculosis by Koch and the introduction of sanitarium methods of Brehmer and Dettweiler. Rest, fresh air, and a well-balanced diet have been the basis for the treatment of pulmonary tuberculosis at the Sanitarium and in the home. Adjuncts to these basic principles are tuberculin therapy, graduated exercise, heliotherapy and artificial pneumothorax. Vaccines, serotherapy, chemotherapy and hosts of drugs have had their advocates and in most instances have proved to be of little value.

It has always been the aim of the tuberculosis worker to secure a specific method of therapy whereby the tuberculous process may be arrested. In an attempt at such specific therapy, the transfusion of blood has been resorted to by the authors in a series of cases at the Chicago Municipal Tuberculosis Sanitarium.

Blood transfusion is indicated in any diseased condition wherein qualitative and quantitative changes have taken place in the blood rendering it unfit to properly fulfil its physiological functions. We find that in pulmonary tuberculosis, the chronic toxemic state results in such changes and studies in the serology, cytology and biochemistry of the blood of tuberculous patients are now being carried on at the Chicago Municipal Tuberculosis Sanitarium, an elaboration of which does not come within the scope of this paper.

Transfusion of normal blood results in an increase in the volume of the blood with consequent stimulation of the hematopoietic organs with increase in erythrocytes and leucocytes, rise in hemoglobin and biological effects involving redistribution of blood in the body, the exact nature of which is undetermined and requires further

study. Transfusion, therefore, is of value in cases of prolonged toxemia, such as we have in pulmonary tuberculosis, associated with a secondary anemia, in which some agent is necessary to throw the balance in favor of the patient and improve the clinical course of the disease.

We found that transfusion of normal blood acts as a supportive measure but improvement is apparently of only temporary nature. That element which has a specific action on the tuberculous process was found lacking in normal blood. With this in mind, we were impressed with the importance of the presence of anti-bodies in the blood of the donor as determined by the complement fixation test for tuberculosis. It is known that the complement fixation test determines the presence of antigen within the body and the circulation of antibodies within the blood. With this type of donor, transfusion of blood may produce results tending to stimulate further experimental work along this line.

Having observed that tuberculous patients with enlarged thyroid glands, some with evidence of thyrotoxicosis, seem to have held their tuberculous process in abeyance, we therefore have been especially interested in donors in whom pathological conditions involving the endocrine system have been encountered. Physiological states in donors with increased pluroglandular secretion and altered metabolism such as pregnancy, lactation and menopause are being considered.

Furthermore, the potentialities of employing the blood as a vehicle for the introduction of therapeutic agents opens up a wide field for research.

The technic employed is as follows:

The blood of the donor and recipient are tested for iso-agglutinins and iso-hemolysins, Wassermann tests for syphilis, and complement fixation tests for tuberculosis. In addition the cytology of the blood of the recipient is studied weekly. The transfusion is done by the indirect method at weekly intervals. The recipients are patients in whom the prognosis is doubtful or bad, who are not improving under the usual methods of treatment and are classified as Moderately Advanced B and C, and Far Advanced A and B, according to the classification of the National Tuberculosis Association.

Case 1. J. A. 9504: Admitted to Sanitarium on March 1, 1920, as a far advanced case of pulmonary tuberculosis, showing an involvement of the entire

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left lung and upper lobe of the right lung. Sputum positive. Wassermann negative. Tuberculosis complement fixation, 2 plus positive. Clinical course on admission—temperature range 96.8 F. to 101.4 F.; pulse range from 72 to 108; respiration range 18 to 22. Sputum weighed 30 grams for the twenty-four hour period. Clinical course immediately prior to transfusion—temperature range 95.6 F. to 101 F.; pulse 72 to 110; respiration 18 to 22; sputum weighed 40 grams.

First blood transfusion on April 15, 1920—375 cc. of blood; second transfusion April 22, 1920—100 cc. of blood; third transfusion April 29, 1920—175 cc. of blood.

Description of donor: Sister of patient, age 33, Wassermann test and complement fixation test for tuberculosis, negative.

The clinical course following last transfusion was as follows: Temperature 96.8 F. to 101 F.; pulse 72 to 108; respiration 18 to 24; sputum weight 25 grams in twenty-four hours. Weight remained stationary.

	April 12	April 19	May 6
Total	11,000		10,500
Polymorphonuclear	84%	81%	72%
Lymphocytes	10	14	72
Large mononuclears	4	3	3
Eosinophiles	2	2	2
Basophiles	0	0	1
Transitional	0	0	0
Arneth Index	93	94.5	93.5

Case 2. P. B. 9503: Admitted March 1, 1920, as a far advanced case of pulmonary tuberculosis involving right upper and middle lobes with cavitation and left apex. Wassermann negative, complement fixation test for tuberculosis 1 plus positive, sputum positive.

Clinical course on admission—temperature 96 F. to 99.6 F.; pulse 72 to 112; respiration 18 to 22; sputum weight 100 grams for the twenty-four hour period.

Clinical course immediately prior to transfusion—temperature 97 to 100.4 F.; pulse 84 to 96; respiration 18 to 20; sputum weight 155 grams.

First blood transfusion April 8, 1920—100 cc.; second on April 15, 1920—325 cc. of blood. This was followed by a chill lasting fifteen minutes and a profuse sweat. Condition improved over night. A third transfusion on April 22—175 cc.; and a fourth on April 29 of 150 cc.

Donor: Brother, age 24, Wassermann and complement fixation test for tuberculosis negative.

Clinical course following last transfusion—temperature 97 to 101.5 F.; pulse 84 to 114; respiration 18 to 24; sputum weight 230 grams. There was a progressive loss of weight.

	April 12	April 19	May 6
Total	7,200		13,000
Polymorphonuclear	44%	84%	73%
Lymphocytes	30	12	18
Large Mononuclears	5	4	6
Eosinophiles	1	0	3
Basophiles	0	0	0
Transitional	0	0	0
Arneth Index	82	96	98

Case 3. O. H. 8241: Admitted August 7, 1919, as a far advanced case of pulmonary tuberculosis.

Sputum positive, Wassermann and complement fixation test for tuberculosis, negative.

Clinical course on admission—temperature range from 97.8 to 101 F.; pulse 76 to 100; respiration 18 to 24; sputum weight 150 grams.

Clinical course prior to first transfusion—temperature range from 97 to 99.6 F.; pulse 76 to 100; respiration 18 to 22.

Transfusion on March 25—100 cc. Transfusion on April 1—200 cc. *

Donor: Brother, age 24, normal blood with negative complement fixation test for tuberculosis.

Clinical course following last transfusion—temperature 97 to 100 F.; pulse 72 to 96; respiration 18 to 20; sputum weight 130 grams. There was a gradual but steady decline in weight.

	March 27	April 12	May 6
Total		9,800	11,000
Polymorphonuclear	73%	64%	80%
Lymphocytes	17	22	16
Large Mononuclears	5	8	2
Eosinophiles	1	4	0
Basophiles	1	2	0
Transitional	3	0	2
Arneth Index	89.5	91	97

Case 4. J. J. 9473: Admitted February 23, 1920, as a far advanced case of pulmonary tuberculosis involving almost entire right lung and left apex. Sputum positive, Wassermann negative, tuberculosis complement fixation test 1 plus positive.

Clinical course on admission—temperature 96.8 to 99.7 F.; pulse 80 to 120; respiration 18 to 24; sputum weight 20 grams.

Clinical course prior to transfusion—temperature 97 to 98.4 F.; pulse 80 to 120; respiration 18 to 24; sputum weight 45 grams.

Transfusion April 8—150 cc. Transfusion March 13—100 cc.

Donor: Sister, age 30, nursing ten-months-old baby, negative Wassermann and tuberculosis complement fixation tests.

Clinical course following last transfusion—normal temperature; pulse 72 to 104; respiration 18 to 20; sputum weight 20 grams. Patient has gained rapidly in weight since admission to the Sanitarium.

	April 12	April 19
Total	7,600	7,000
Polymorphonuclear	70%	54%
Lymphocytes	22	35
Large Mononuclears	6	6
Eosinophiles	0	4
Basophiles	0	0
Transitional	2	1
Arneth Index	80	84

Case 5. W. Q. 8704: Admitted October 7, 1919, as a far advanced case of pulmonary tuberculosis, showing marked involvement of upper halves of both lungs with persistent gastro-intestinal complications. Sputum was positive, Wassermann 3 plus, complement fixation test for tuberculosis negative.

Clinical course on admission—temperature 97 to 98.8 F.; pulse 84 to 108; respiration 18 to 20.

Clinical course before first transfusion—temperature 97.5 to 100; pulse 80 to 126; respiration 18 to 24; sputum weight 65 grams.

Transfusion on March 25—120 cc. Transfusion on April 1—250 cc., followed by a slight chill. Trans-

fusion on April 15—100 cc. Transfusion on April 22—250 cc. Transfusion on April 29—150 cc.

Clinical course following last transfusion—temperature 97.5 to 99.6 F., with much less fluctuation, and pulse 88 to 112, with much less fluctuation; sputum weight 50 grams. There has been a slight loss of weight.

	March 27	April 12	May 6
Total		9,400	9,200
Polymorphonuclear	78%	78%	72%
Lymphocytes	* 15	12	24
Large Mononuclears	6	4	4
Eosinophiles	0	4	0
Basophiles	0	0	0
Transitional	1	2	0
Arneth Index	87.5	92	95

Case 6. V. R. 8405: Admitted August 25, 1919, as a far advanced case of pulmonary tuberculosis, with involvement of upper and middle lobes of right lung and upper lobe of left lung. Sputum was positive, Wassermann negative and tuberculosis complement fixation test 3 plus positive.

Clinical course on admission—temperature 96.8 to 99.5 F.; pulse 74 to 92; respiration 18 to 20; sputum weight 70 grams.

Blood transfusion on April 1—100 cc. Transfusion on April 8—125 cc.

Donor: Sister, age, 26, nursing 15-months-old baby, normal blood with negative complement fixation test for tuberculosis.

Clinical course following transfusion—temperature 96 to 99.5 F.; pulse 76 to 96; respiration 16 to 20; sputum weight 70 grams. Weight showed a steady decline.

	April 12	May 6
Total	11,000	
Polymorphonuclear	80%	86%
Lymphocytes	14	12
Large Mononuclears	4	2
Eosinophiles	2	0
Basophiles	0	0
Transitional	0	0
Arneth Index	92	94

SUMMARY

It will be noted that only advanced cases with unfavorable prognosis have been utilized in this work.

The donors in each case were normal individuals with negative complement fixation tests for tuberculosis, negative Wassermanns and negative tests for iso-agglutinins and iso-hemolysins.

In this series of six cases, the patients have received from two to five transfusions at weekly intervals of 100 to 375 cc. of blood.

Transfusion of over 200 cc. of blood usually resulted in a reaction characterized by chill, fever and sweat with prompt recovery therefrom.

The clinical course in this series of cases was not appreciably altered.

Changes in the blood of the recipients in this series was a steady deviation to the left or no change as determined by Arneth Count.

In conclusion, it is evident that normal blood

is devoid of that specific element which will arrest the progress of the disease. Further experimental work is now being carried on with a series of cases in which the donors show a positive complement fixation test for tuberculosis.

THE PRECANCEROUS STAGE*

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Just what is meant by the much-used and generally indefinite term—pre-cancerous stage. In spite of the really tremendous amount of work which has been done upon carcinoma, we are still in absolute darkness as to the direct cause of the disease. The best that we can do is to say that certain conditions and affections apparently predispose to the development of malignancy. In view of this fact, and considering the great prevalence of carcinoma, it seems wise to consider carefully those conditions which we do recognize as often cancer, with a view to eliminating them as thoroughly and as early as possible.

There has, so far, been considerable speculation about the pre-cancerous stage and some attempts have been made to establish definitely the relationship of certain types of malignancy to certain conditions which have often been found, clinically, to precede them. For instance, the etiological relationship of gastric ulcer to gastric carcinoma. This has been well worked out and the sequence found to occur frequently enough to warrant the assumption that chronic ulcer of the stomach is often the pre-cancerous stage of ultimate carcinoma.

The pre-cancerous stage is that stage which shows in itself no definite symptoms of malignancy and yet which is often found, both clinically and pathologically, to precede true carcinoma. The question, of course, is still open as to whether the condition has not been cancerous from the beginning and is not, therefore, really pre-cancerous at all, but as there are no findings of malignancy in these early stages and as they are clinically inseparable from benign lesions which do not always become malignant, we have no grounds for assuming that they are merely, in themselves, the beginnings of true

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malignancy. So long as this is true, the term pre-cancerous seems the only appropriate and justifiable one.

As a working basis, then, for this discussion, we may call a condition pre-cancerous when it presents those signs, symptoms and pathological findings, which may indeed lie latent for years or for the entire life-cycle of an individual, but which also, under the stimulus of certain conditions which we do not now recognize, but which we assume to be etiological factors, develop into and become true malignant or carcinomatous growths.

In this sense, we recognize as pre-cancerous, many conditions, some of the most frequent and important of which are:

Skin:

- Xeroderma pigmentosa.
- Chronic dermatoses from exposure to light, X-Rays, etc.
- Pigmented nevi or moles.
- Lupus vulgaris.
- Lupus erythematosus.
- Chronic scaly lip.
- Fissures of lip.
- Keloids.

Tongue:

- Leucoplakia.
- Luetic scars.
- Wounds from jagged teeth.

Esophagus.

- Luetic strictures.
- Strictures from injury, caustics and other causes.

Stomach:

- Peptic ulcers.

Intestine:

- Chronic inflammation and diarrheas.

Rectum:

- Fissures.
- Hemorrhoids.
- Polyps.
- Chronic symptomatic diarrheas.

Gall-bladder:

- Chronic cholecystitis.
- Gall-stones.

Pancreas:

- Chronic pancreatitis.
- Pancreatic calculi.

Uterus:

- Chronic endometritis.
- Hyperplasias of various origin.
- Lacerations and erosions of cervix.
- Hydatid mole.

Breast:

- Chronic mastitis.
- Chronic eczema of the nipple.

These conditions, while in themselves benign,

are known to be the forerunners, in many cases, of true malignancy. They are definitely not malignant in themselves and if left to themselves do not always become so. They are, however, the fertile soil, ripe for development, and given this soil plus the unknown factor or stimulus which may or may not be the directly exciting cause of carcinoma, they develop, often very rapidly, into typical malignant growths. It is the purpose of this paper to discuss these various pre-cancerous lesions, with an especial view to their early treatment, this treatment being, so far, the only real prophylaxis against carcinoma. As we know that gastric cancer has, in 60 per cent. or more cases, been preceded by chronic gastric ulcer, is it not the part of wisdom to remove all such ulcers before they become malignant. It has been estimated that in fully 40 per cent. of all cancers, some long-continued simple disease or chronic irritation has been known to precede the malignant growth, therefore it is important to treat the pre-cancerous lesion. If we have present a condition which we know is often the clinical precursor of carcinoma, even though this condition, in itself, is relatively benign, it is surely far better to get rid of the benign condition, with relatively small risk to the patient, rather than to wait with the infinitely greater risks of having to deal with malignancy, the diagnosis of which is usually delayed, the treatment of which is always doubtful and the outcome uncertain if not hopeless.

As to how pre-cancerous lesions are precipitated into malignancy, there are various theories. Ewing, whose recent book on Tumors is very exhaustive, states several of these theories as follows:

1. There may be a benign or a minute malignant tumor in the tissue before injury, as the presence of a cancerous nodule in chronic cystic mastitis. This preceding lesion is merely lighted up suddenly by injury of some form and then goes on rapidly to the full development of whatever was in the tissue prior to the trauma and which might yet have remained quiescent for years.

2. Pre-cancerous conditions plus trauma, such as wounds of a leucoplakia of the tongue by the teeth, the incomplete surgical removal of ulcers, polyps, etc.

3. Misplaced and undeveloped organs, plus

trauma, as in supernumerary breasts, undescended testicle, etc.

4. Aberrant cell-groups quiescent in their original state, such as those contained in the pigmented mole, may be precipitated into malignancy by the trauma,—such as melanotic sarcoma or carcinoma following injury to a pigmented mole.

5. Normal cells plus trauma may develop malignant tumors or normal cells plus trauma plus predisposition.

Skin: Taking up the specific lesions of different parts of the body which we call pre-cancerous, we may begin with those of the skin. This is probably one of the favorite sites for our so-called pre-cancerous lesions, partly because here all lesions are frank and open and the presence of some disturbance is always known from its earliest beginnings, even though undiagnosed as malignant.

The truly cancerous lesions of the skin occur usually in old people. Several writers have concluded that aging tissues have a local predisposition to tumor-growth, due to the general tendency toward arteriosclerosis in old people. There seems, however, to be no particular evidence in support of this theory.

There are, however, many skin-lesions which we can class as definitely pre-cancerous, as they fulfill all the requirements of our definition of the precancerous stage. Chronic eczema, indolent ulcers, burns and chronic sinuses from necrosing bone often remain active but benign for many years. Then as old age approaches or the necessary irritation, trauma or other exciting cause appears, these lesions undergo the characteristic changes of malignancy. Mild, chronic irritation or often-repeated trauma seem most favorable to the development of carcinoma, a single severe injury to that of sarcoma.

From all these skin-lesions which may lead ultimately to carcinoma, we should suspect most strongly:

All moles and warts which grow in size, especially those which change color and grow dark. If these are removed surgically, and treatment should be radical, the danger of distribution of malignant cells, if any be present, and the danger of exciting rapid malignant degeneration in an originally benign process being great, if the

surgery is partial and therefore merely enough to be traumatic without being curative.

Small scaling spots on the skin which grow thicker and form scales and bleed easily. All similar lesions which appear in the course of irritation from various occupations, such as in workers in tar, the boils which occur in paraffin-workers, lesions on the lip in men who smoke a great deal, workers in anilin-dyes, the skin of those who are much exposed to the sunlight, air, wind, etc., such as sailors, soldiers and other outdoor workers, any occupation, in fact, the practice of which is a constant source of irritation. It is well-known that Roentgenologists, especially those who work constantly in direct exposure to the rays, are very subject to chronic dermatitis and that this condition, in turn, is very prone to later malignancy.

All scaling warts, especially those on the so-called sites of predilection, namely the lips, nose, eyelids, cheeks, ears, neck and back of hands.

Senile keratoses, even when apparently benign, are often found to contain areas of malignant degeneration, so that it is difficult to distinguish them from the beginning stages of true epithelioma. A keratosis, however, always contains areas which are hyperplastic and yet not in any way malignant, so that it can definitely be called pre-cancerous.

Tongue. Leukoplakia, chronic fissures or syphilitic lesions or scars of any type are often known to precede epithelioma of the tongue. Hyperkeratosis and increased vascularity seems to be the important pathological findings in these cases.

Throat. Carcinoma of the tonsil is rare and follows chronic infection and irritation. When found, it may be associated with primary carcinoma elsewhere in the pharyngeal or laryngeal tract.

Laryngeal irritation from constant smoking, with the resultant hyperplasia of the mucosa is a frequent pre-cancerous lesion.

Breast. Here we have several of our most striking examples of the pre-cancerous stage. Chronic mastitis, either simple or cystic, is the most frequent forerunner of mammary carcinoma. Tietze says that 10 per cent. of all cases of cystic mastitis develop cancer. In 5 out of 18 cases of senile involution of the breast he found carcinomatous areas in the peripheral

parts. Speese found cancer changes in 15 per cent. of all cases of chronic mastitis examined. Another found these changes in 5 out of 28 cases. Ewing states that his own material showed that 50 per cent. of all breasts excised for cystic disease showed pre-cancerous changes or small carcinomas. Nearly all cancerous breasts show phases of chronic mastitis in the outlying portions. The growing tendency now is to remove the whole breast for recognized chronic mastitis, whether suspicious or not of malignancy and this is undoubtedly the only safe method of treatment, if future trouble is to be avoided.

Chronic eczema of the nipple or Paget's disease is another highly important pre-cancerous lesion. This term is sometimes used to mean only that stage of the disease which is characterized by well-defined carcinomatous change and infiltration. Ordinarily, however, it is used to include not only this stage, but also that of the chronic non-malignant dermatitis which precedes it, and it is this preceding dermatitis which is recognized early, which can be dealt with thoroughly and effectively at that time. The prognosis here is particularly good, as an absolute prophylaxis unless one waits for the development of true malignancy with its accompanying infiltration, great toxicity and possible metastases. With all that we now know of the many cases of carcinoma following chronic mastitis and eczema of the nipple, with the possibility of very early recognition of the benign condition, there seems little excuse for delaying the treatment of the pre-cancerous stage until the recognizably cancerous has set in.

Stomach. Here we have another well-known and probably one of the most frequent of pre-cancerous lesions, the peptic ulcer. It has been known for a long time, that gastric ulcer often precedes gastric carcinoma, or that the clinical syndrome, now known to mean the presence of ulcer, often precedes for a number of years the development of cancer. Lately considerable work has been done on this subject and some statistics compiled as to the frequency with which malignant disease follows the benign. Dr. Smithies has studied carefully a large series of cases and has drawn some very significant conclusions. A series of 543 cases of operatively demonstrable

gastric ulcer and 953 cases of gastric carcinoma were tabulated for study. It was found that in 646 out of the 953 cases of gastric carcinoma, that is, in 66 per cent., there was a chronic dyspeptic history of the type commonly associated with gastric ulcer preceding the period of malignancy.

In 93 cases or 9 per cent. there was a history of dyspeptic disturbances clinically corresponding to the "atypical" ulcer type, previous to the known development of malignancy.

In 337 cases or 35.7 per cent., the malignant gastric disease appeared without any previous gastric disturbance.

Of these various disturbances, the period of duration in years is given as follows:

1. The average duration of all symptoms of 544 cases of benign gastric ulcer was 11 years.
2. The average duration of the clinically non-malignant dyspeptic period of the "ulcer" type of 646 cases that later showed malignancy was 10.8 years.
3. The average duration of the clinically malignant period in the group just described, that is, those in which carcinoma followed ulcer, was 6 months.
4. The average duration of the 337 cases which were clinically malignant from the start was 7 months.

He also found in this same series of cases, that out of a group of 1724 cases of peptic ulcer, 1181 were situated in the duodenum. That is, he found duodenal ulcer more frequently than gastric ulcer in the ratio of 1:2.45. This corresponds with the statement of Sir Berkeley Moynihan's that duodenal ulcer is much more common than the gastric form. On the other hand, it is well-known that gastric carcinoma is much more common than duodenal carcinoma. Dr Smithies found it in only 9 out of 1181 cases. We must believe, then, that gastric ulcer is a more favorable site and therefore more often a pre-cancerous lesion than is ulcer of the duodenum. Most duodenal carcinomas, when found, are at or near the papilla of Vater, where trauma is most likely, but duodenal ulcers, which extend toward the pylorus may become malignant there and nowhere else.

In the stomach itself, it was found that the sites of predilection of ulcer and carcinoma co-

incide closely. Ulcers of the stomach are found at the pylorus in 47 per cent. of cases,—carcinomas in 37 per cent. Ulcers are found on the lesser curvature in 31 per cent. and carcinomas in 29.1 per cent. There is, of course, always the question whether or not those ulcers which terminate in malignancy may not be malignant from their inception, but in view of the long period of clinically benign growth, with the short period of malignancy, the indications are all to the effect that the ulcer is precancerous, the malignant transformation being distinctly separate.

From this study, it appears that carcinoma most frequently arises from chronic gastric ulcers, clinically benign. Clinically, we cannot differentiate between the chronic ulcers which will remain benign and those which will later become malignant. Therefore, an early and thorough removal of all chronic gastric ulcers is advisable, not only as a cure for the ulcer itself, but as an important prophylaxis against carcinoma.

Intestine. Carcinoma is relatively rare in the small intestine, but occurs more frequently in the large bowel and in the rectum. Eight per cent. of all cases of carcinoma occur in the rectum and sigmoid, according to recent statistics. Of the pre-cancerous stage of carcinoma of the colon, we know little, except that there is longstanding chronic inflammation of a low grade. Carcinoma of the rectum is almost always preceded by benign ulceration of some form. The original site may be a fissure, ulcer, hemorrhoids or polyp or the malignancy may follow years of a symptomatic diarrhea. Old fissures and hemorrhoids, when constantly irritated by constipation often form the nucleus or starting-point for a future malignant new-growth.

Uterus. Here there are numerous conditions which are recognized clinically as preceding carcinoma of the uterus in many cases, or as associated with it. It is generally conceded that myomata are often found to precede and sometimes to accompany carcinoma of the body of the uterus. One report from the Mayo clinic states that myomata were present in 10 out of 40 cases of carcinoma of the corpus uteri. Local hyperemia, chronic endometritis and ulceration of

the mucosa favor the development of myōma into carcinoma.

Cervical erosions usually precede carcinoma of the cervix and may be regarded as pre-cancerous. The earliest cases of cervical carcinoma described pathologically have been found to show localized growths of hyperpapillae in portions of chronic erosion, showing that the erosions were going over, histologically, into carcinoma. Old scar-tissue from lacerations at childbirth is frequently a pre-cancerous stage.

Chronic inflammatory diseases of both body and cervix are important from the standpoint of potential carcinomas. Polese states that endocervicitis preceded carcinoma of the cervix in 34 of his 48 cases. Leukoplakia is often found and is significant of future carcinomatous degeneration. Gonorrhea, syphilis and occasionally tuberculosis are often associated with the beginnings of carcinoma even though they are not directly pre-cancerous. Many cases of endometritis show an atypical hyperplasia of the endometrium and epidermization, which are not normal, nor yet malignant and which may best be termed pre-cancerous. Berkeley and Bonner consider leukoplakia of the vulva as the first stage of carcinoma.

Uterine polypi and submucous fibromyomata are important chiefly because of the nutritional changes they produce in the nearby mucosa.

There are many cases of glandular hypertrophy and hyperplasia of the endometrium which are reported as showing atypical morphology of the cells. In these there were found no definite malignant changes, but many clinically suggestive signs, which are sometimes known to precede carcinoma. It has been stated that for each type of fully-developed cancer, there is a corresponding type of benign intermediary change.

The important thing, then, is to remove as early as possible, but certainly before the cancerage, all chronic ulcerations, all chronic inflammations or other sources of irritation to the uterus, either cervix or body. There is considerable disagreement, as of course there is naturally, in a subject as yet so indefinite, as to the probabilities of carcinoma developments from old lacerations of the cervix. Some writers have questioned the advisability of operating for this condition alone, claiming that the scar-tissue

formed by operation is as potentially carcinomatous as that formed by the original lacerations. This may be true, in so far as the scar-tissue itself is concerned, but with the vast majority of old lacerated cervixes, there is also erosion, endocervicitis or other form of chronic irritation, which is not present with the scar-tissue formed following an operative procedure and which does not, moreover, clear up with ordinary medical treatment without the surgical removal of the original lacerations. Chronic ulceration and hyperplasia of the mucosa seem to be the predominating factors in pre-cancerous lesions of the uterus, and if these conditions prevail in spite of local or general treatment, surgical measures should be adopted without waiting for the development or even the first suspicious signs of malignant growth. As carcinoma of the cervix is one of the most frequent forms of all cancerous tumors, and as it is so readily accessible with the operative risks at a minimum to the patient, this region affords an especially favorable field for the prophylactic treatment of cancer.

Liver and Gall-bladder. As primary carcinoma of the liver and bile-ducts is rare and as the carcinoma found there is usually secondary to a carcinoma in some other organ, the metastases developing by way of the blood or lymph-stream, it can well be seen that the pre-cancerous stage of carcinoma of the liver is to be looked for outside of the liver itself. Frequently the stomach is at fault and here our search takes us back to the already tried and convicted peptic ulcer. Occasionally the growth is by direct extension and then the pre-cancerous lesion is usually to be found in the gall-bladder, pancreas or duodenum or sometimes in the pylorus.

The guilt for carcinoma of the gall-bladder and common duct, however, can quite often be fixed upon chronic cholecystitis or gall-stones or the combination, as the typical pre-cancerous lesion. In a very large percentage of cases of carcinoma of the gall-bladder, the condition has been preceded for years by chronic cholecystitis or more often by gall-stones. Often the carcinoma is associated with stones and the onset of malignancy has been prefaced by distinct attacks of gall-stone colic. Here again, gall-stones being the commonest pre-cancerous lesion,

chronic irritation caused by these stones is undoubtedly the factor which precipitates the benign into the malignant. Probably the condition is more common than is often realized as a precursor of gall-bladder carcinoma, as so many cases of gall-stones, while affording symptoms which could and should be recognized, still often pass undiagnosed.

The frequency of cases in which gall-stones precede carcinoma is given by different writers as varying from 69 to 100 per cent. The percentage of cases of cholelithiasis which later develop carcinoma is variously given as from 4 to 18 per cent. Secondary carcinoma of the gall-bladder rarely produces stones so that they cannot be regarded as the result of the tumor-growth and must precede it. The constant mechanical irritation of the stones is probably the direct causative factor. Considerable pathological work has been done on gall-bladders which have been removed for stones, many of which have been found to contain minute areas of carcinomatous change. Elongation of the glands, over-growth of epithelium and fibrosis of the submucosa were found in the pre-cancerous areas. Cholecystitis, while producing the same general conditions which produce gall-stones and later carcinoma, develops into carcinoma much less frequently than does cholelithiasis, probably for lack of the directly causative agent found in the mechanical trauma produced by the constant irritation of the stones on the already abnormal and hypertrophied mucosa.

Some writers claim that cirrhosis is the chief pre-cancerous lesion of the liver, either that due to alcohol or to syphilis, and that it is found as a preceding condition in 50 per cent. of all billiary tumors. These statistics, however, include both the benign and the malignant neoplasms, so that the percentage of cases which are really pre-cancerous, even as a matter of chronology, is uncertain.

Pancreas. Very few observations have been made on pre-cancerous stages in the pancreas, but carcinoma of this gland is known often to follow chronic pancreatitis and this, in turn, is often associated with gall-stones, whether as a direct effect of the latter condition or as a co-product with it, we have no definite means of knowing. With the close proximity of the

common and pancreatic ducts, however, it is perfectly reasonable to suppose that the relation, being distinctly not coincident, is probably etiological. The treatment, then, of carcinoma of the pancreas is the prophylactic treatment of early cholecystectomy.

There are many other organs of the body in which carcinoma is found with more or less frequency, but the most frequent are those just discussed. For the most part, carcinoma of other organs are of obscure origin and their pre-cancerous stages are likewise shrouded in obscurity.

Carcinoma of the kidney probably follows upon an adenomatous benign growth or adrenal rests. The treatment, of course, is surgical as soon as there is any suspicion of new-growth of any type, an exploratory operation, at least, being advisable.

Chronic or senile hypertrophy of the prostate is very often a forerunner of carcinoma of that organ and the clinical history of the two merge very gradually into one another. In this respect and also as regards the slowness of the process, its localization and its incidence in old people, it closely resembles the clinical course of the various senile keratoses and skin-carcinomas. Carcinoma of the penis follows a chronic catarrhal balanitis in many cases,—it has been estimated as high as 75 per cent., while phimosis has been found in 50-80 per cent. of cases. Malignant tumors of the bladder nearly always follow a benign tumor-growth or at least one which gives no evidence, either clinically or upon inspection, of malignancy, papilloma being the form most often described.

It seems to be quite generally conceded that pruritus and leukoplakia of the vulva are most frequently precancerous lesions,—also psoriasis, abscesses of the vulva, especially of the Bartholinian glands, and occasionally syphilitic scars.

Carcinoma of the thyroid follows goiter of one form or another, in 104 out of 200 cases, or about 50 per cent., according to Ehrhardt. This seems to have been, in most of the recorded cases, following the cystic and adenomatous forms, rather than the exophthalmic or toxic goiter.

Anthraxis and trauma are possible forerunners of carcinoma of the lung, but of this, re-

ports are inaccurate and there is no definite evidence. The frequency of their association, however, points to a causative relationship, however, rather than mere coincidence.

Extra or supernumerary organs and misplaced or undeveloped ones are very prone to the development of malignant tumors. The undescended testicle is a prominent example.

SUMMARY

The conditions covered in this discussion do not, by any means, include all those which might have been mentioned, but the most important, in so far as we now know them have been enumerated and an effort made to show their frequency and the possibilities in their treatment, provided they are recognized as pre-cancerous while still in that stage. Every organ, gland and tissue in the body, is subject, with varying degrees of frequency, to be sure, but nevertheless to some degree, to the formation of lesions which, under certain conditions and with the addition of certain excitants, may go on to malignancy. These constitute the great mass of lesions which we term the pre-cancerous stage. Many of these conditions are probably not yet recognizable and many have been studied very little, so that we know almost nothing about them, the time of their inception, the age of incidence, their frequency, symptoms, signs, the chances for malignant development and the best methods of treatment. It would seem that nowhere in medicine is there a greater field for investigation, and for the education, both of the public and of the profession, to the value not only of early diagnosis of carcinoma itself, but of early diagnosis of pre-cancerous lesions.

This early diagnosis, with sufficient knowledge of the possibilities which may develop from the existing condition to make the prognosis clear, should do much toward furthering the willingness of both patient and physician to undertake the radical treatment of the pre-cancerous stage. Usually, this treatment is surgical, and it should be as thorough as that for carcinoma itself, in the removal of every vestige of potentially carcinomatous tissue, although in the pre-cancerous stage there are, of course, no metastases, and so operation can always be less extensive, less mutilating and with infinitely less risk to the patient.

A GLAUCOMA QUESTION*

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The tendency of observers of late years to separate the non-congestive type from the congestive types of glaucoma, has been attended with more or less success, largely due to the prevalent divergence of opinion as to the form of therapy to be applied in the former type—surgical or non-surgical. This latter phase of the question is, however, of no particular bearing on the motive of this paper. This tendency, I am inclined to think, is not due so much to the definite knowledge at hand that the non-congestive type is a distinct entity as to our inability to explain this phenomenon upon the theories most favorable to the explanation of the congestive types of glaucoma.

Some observers have even gone so far as to take the definite stand that glaucoma simplex is an absorptive form of optic neuritis, attended with cupping and a low grade uveitis.

This theory was most self-satisfying; it relieved one of so much thought, it permitted the acceptance and application of the prevalent theories that explained nearly every phase of the problem of glaucoma. But as time went on and those working in the larger clinics where an abundance of material is always present, were able to observe these cases from this angle, they found that it was not quite so self-explanatory as it seemed originally, the result being the continued divergence of opinion as to the therapy best suited to the non-congestive type of glaucoma.

The observations to follow, extending over a period of years and deductions resulting therefrom are based purely upon my own opinion. The theory which I wish to present is, I believe, original. I have discussed this problem from this angle with but two observers, for whose opinion I have the most profound respect. One of the gentlemen did not agree with me, the other was quite enthusiastic.

I am thoroughly aware of the vast amount of experimental work accomplished and the many fascinating theories propounded and recorded in the literature. I am thoroughly cognizant of their

value and appreciate, as we all do, their practical application. To this already voluminous collection I wish to present for your view a theory upon *one phase of the question only*, and this I am inclined to think, will, in a measure, enhance the other theories now prevalent and looked upon favorably.

In presenting this theory for your consideration I find myself approaching the subject with more or less timidity; this timidity I am inclined to think is largely due not to its theoretical basis, *per se*, but to its very simplicity. The question then for your consideration is:

1st. Is the congestive and non-congestive type of glaucoma one and the same disease?

2nd. If so, why do we have congestive symptoms in one and the absence of them in the other?

In answer to the first question I am willing at this time to believe that they are one and the same disease. Their difference in my opinion is but one of intensity of the precipitant and the compensatory response of the eye-ball to that condition. I am sure we have all seen cases where the line of demarcation between the different types has been so vague that we would be willing to make a statement one day and reverse ourselves a few days hence. We have all seen cases where but one eye was involved. Again, we have seen bilateral cases where in one eye a certain type prevailed and in the other a different type existed. We have seen cases where the congestive type has been engrafted upon a non-congestive case. In short, we have all seen every intermediate variety, forming a continuous transition from the simple non-congestive type to the acute fulminating types.

In answer to the second question. I believe the absence or presence of congestive symptoms is largely dependent upon the anatomic development of the eye-ball, by which I mean, we are all familiar with the following facts: That certain anatomic conditions predispose to glaucoma, e.g. hyperopia, small cornea, shallow anterior chamber, highly developed muscle of accommodation, and well developed ciliary processes, large lens, diminished circumlental space, etc. The capsule of the eye-ball consists of the cornea and sclera, which is more or less fixed, depending upon the age; the elasticity diminishing as age advances. The weakest point in this, we might say, fixed capsule, is the lamina cribrosa. This, we find, varies in thickness from 0.1 of mm. to

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.4 mm. At this point we find a total absence of the scleral tissues. Occasionally a few fibres of the choroid may be present. But it consists almost wholly of the fibers of the optic nerve and the lamina cribrosa, the lamina cribrosa representing less than one-half of the thickness of the sclera and we find this consists largely of yellow elastic tissue. (Collins and Mayon). We have then an almost non-resistant capsule, with the exception of the lamina cribrosa, which varies in thickness, and is never more than one-half that of the sclera, almost entirely composed of yellow elastic tissue.

Certain physiological changes take place that are worth recalling.

The meshwork of the iris angle (ligamentum pectinatum) is a cellular structure at birth, which undergoes a progressive and physiological fibrosis, with subsequent sclerosis, until finally it becomes a fibrous structure. The individual strands of this meshwork are more than two times as large at advanced age as at birth, as a result the alveoli of the meshwork becomes markedly reduced in size. The spongy nature of this meshwork affords free access of aqueous to the venous sinus of Schlemm, thence by tributaries into the supra-choroidal space and anterior uveal venous system. Fuch's Iris Crypts afford direct access of aqueous to the veins of the iris.

Pathologically we find early, a sclerosis of the ligamentum pectinatum and of the tissues to the inner side of Schlemm's canal. In acute glaucoma the ciliary body is more or less distended by a venous stasis and may at times almost obliterate the circumferential space, thus pushing forward the root of the iris and lens. In old chronic cases the root of the iris is adherent to the posterior surface of the cornea, blocking off entirely or almost entirely the drainage angle. The openings for the exit of the venae vorticosae are narrowed. The anterior ciliary vessels are usually enlarged. The aqueous is said to contain a greatly increased quantity of albuminoids and inorganic salts. This increase is said to be greater in the acute form. According to Troncoso the colloid nature of the aqueous lessens its diffusability and prevents its free passage into the lymph channels. The cupping of the disc, its different graduations, the dipping of the vessels,

the arterial pulsation, the peri-papillary pallor, etc., etc.

To me the cupping of the disc is the most interesting phase of the entire glaucoma question. If it is a fact, and one I think, we are all more or less agreed upon, that the depth of the cup is not in direct ratio to the intra-ocular pressure, then the basic principle of this hypothesis is fundamentally correct. In other words, the disc with the greatest cupping does not indicate the greatest intra-ocular pressure as seen in the so-called glaucoma simplex and buphthalmus. The disc with the least cupping is seen in the acute fulminating type. Between these two extremes we find every degree conceivable. This being accepted as facts, we can now go on to the next step.

Why this extreme cupping in one case with little or no congestive symptoms and the little or no cupping in the other case with the most pronounced congestive symptoms?

According to the volumetric theory, the normal intra-ocular pressure depends upon the volume of fluids within the eye-ball. Any variation in the quantity gives rise to a change in the pressure. That is, if the balance maintained by inflow or production of fluids and the outflow or resorption is disturbed increased tension takes place. (Henderson). We need not at this time go into the further details of this theory for the purpose of this paper.

The so-called circulatory theory which takes into consideration the hydrostatic pressure existing between the venous system and the intra-ocular pressure should be mentioned and remembered. This is largely based upon the facts that the outflow of fluids into the sinus is by diffusion and not by filtration. Further, that the physiological thickening of the strands of the meshwork of the iris angle furnishes a mechanical obstruction between the anterior chamber and the venous sinus of Schlemm. Thus is maintained the balance of pressure between these two systems.

The Fischer theory which is based upon the affinity of tissues for water or the tissue colloids for water should also be mentioned.

We have then as the most pronounced predisposing factor, the sclerosis of the meshwork of the iris angle and to a lesser degree probably many other factors.

The circulation is probably an important

exciting factor, whatever the factor or factors may be that can or will produce a disturbed circulation. What conditions will produce an anatomic pathology or psychic disturbance is not material to this question. Again, whether the aqueous as the result is in such state, by that I mean its viscosity, that diffusion through the iris angle is impeded or impossible is also not in point here.

The facts remain whatever the predisposing cause or causes may be. Whatever the circulatory factor or factors may be that can precipitate an attack, the resultant state, whether it be a mild or a violent attack of glaucoma is entirely dependent upon the degree of the predisposing and exciting factor or factors and the compensatory ability of the eye to respond to the abnormal condition.

To simplify this statement, let us conceive of a case where the predisposing elements are present in a mild degree and the precipitating factor present to the same degree—glaucoma will result, but the attack may be so mild as to pass unobserved. As time goes on and if this delicate balance is not corrected, other attacks will result and eventually sufficiently severe to produce symptoms recognized by the patient, when he will consult a physician.

Again we know that if the intra-ocular pressure should rise suddenly to a considerable height, congestive symptoms will result. As in the swelling of the lens in trauma. Again the symptoms are absent when the increase in tension is gradual and remains within narrow limits, as in intra-ocular tumor. I have seen a tumor occupying four-fifths of the globe, and at no time was the pressure elevated. Again in buphthalmus we have the marked enlargement of the capsule, the deep ampullaform cupping entirely out of proportion to the pressure. Here we probably have an absence of the precipitating factor and a preponderant presence of the predisposing factor, the anatomic state. Again in ectasia of the cornea or sclera. Disease of these parts preceded the bulging, the intra-ocular pressure was greater than the external pressure and ectasia resulted at the point of least resistance. Again, I have seen staphyloma of the sclera in the absence of a history of previous diseases as in the following case which is in point here:

Case 1. D. B. Aet. 67, married, salesman. Above

average intelligence. First came under my observation October 28, 1915.

Family history good.

Personal history: Subject to dizzy spells which may come on suddenly and is at times compelled to support himself to keep from falling. Also has dizzy spells after close work. Difficult to read with present glasses.

Lost sight in right eye gradually. First noted failing vision about twenty years ago. Has never had any pain or redness of eyes worth mentioning.

Examination disclosed the following:

Right. Vision, *nil*, no perception or projection. Eye deviated outwards and appears prominent.

Cornea. Deep infiltration, luster absent. Epithelium roughened, but does not take the stain.

Sclera. Thin and bluish over entire equator. Has a large staphyloma over attachment of internal rectus, another staphyloma not quite so large over attachment of external rectus.

Tension. To finger about 3 plus.

Left. Vision 20/80, glasses 20/33 minus 2. Dilatation with euthalamine. Gave +1.00 20/25. Reading, Snellen 3.

Cornea. Anterior chamber, iris negative. Lens rider's of incipient cataract.

Fundus. Negative.

Tension. Taken with Schiotz tenometer three times.

R. Average 70, L 22.

Urinalysis repeated. Negative. Had passed insurance examination about two years previous.

Dec. 14, 1915. Tension again taken with tenometer.

R. Average 70, L. 18.

Transillumination of right for possible neoplasm neg.

Last seen January 16, 1917. Right. Tension high. Vision, *nil*.

L. 20/40, Correction 20/33 minus 1—small central opacity developing in lens. Tension neg.

Repeated perimetry disclosed nothing in particular in left eye. The patient in this case has since passed away. I was unable to get this eye, owing to their moving east.

It was my opinion, in this case, that the Schleral staphylomata were the result of the increased pressure. The probabilities are that the lamina cribrosa was thick or had been forced back as far as possible and the sclera proper then became the point of least resistance and bulged at these parts.

Another case in point to this subject, is the following:

Case 2. C. B. Aet. 56, married, harnessmaker.

First came under my observation May 22, 1917.

Family and personal history good. Is at times subject to rheumatism and left side of face swells occasionally.

Eye history. For the past three years has noted that the vision in his left eye becomes blurred, some-

times, so bad that he cannot see to do his work. There is some pain with these attacks, which come and go, but never severe. Eye becomes blood-shot and feels as if pressure was being applied.

Right eye. Vision, fingers at two feet on temporal side only for past two years. Central vision is entirely gone. He does not recall when this first started.

Tension. To finger, normal.

Cornea. Anterior chamber neg.

Iris dilated to 6 mm.

Ophthalmoscopic examination: Typical glaucoma simplex, depth of cup about 3 diopters, fundus otherwise neg.

A few stationary cholesterol crystals were found in the vitreous.

Left eye. Vision, $15/50 + .50 = +.50$ axis 180 15/33.

Tension to finger questionable if elevated.

Cornea. Anterior chamber, iris neg.

Ophthalmoscopic findings, media, neg. Many small fresh hemorrhages, both deep and superficial throughout retina. Arteries somewhat contracted. Veins dilated and tortuous. No cupping of disc recognized.

Repeated urinalysis disclosed, both hyaline and granular casts. Undoubtedly the cause of the tortuosity of the vessels and the hemorrhages. These hemorrhages were eventually absorbed with some improvement in vision, veins remained somewhat tortuous.

The disc now showed a possible cupping of one diopter.

Operation. Vision improved slightly. Tension normal. There has, however, since been a gradual decrease in vision. 2/3/20 R. Vision nil. Cupping now about 7 diopters, fundus otherwise neg.

Left. Vision with glasses about 15/50 with difficulty.

At no time has there been an elevation of tension since operation.

A summary of these two cases discloses some interesting points.

In case 1, we found an eye-ball with a tension of 70 with marked ectasiae of the sclera over the attachments of the muscles which incidentally is the thinnest part of the sclera proper, with a complete absence of congestive symptoms over a period of twenty years. The other eye being absolutely normal with the exception of the incipient cataract.

In case 2, we have in the right eye a typical glaucoma simplex picture with about seven diopters cupping. In the left eye a mild congestive type of glaucoma with barely perceptible cupping.

To Recapitulate:

1. The outer coat of the eye-ball is not in all cases a non-elastic capsule. The lamina cribrosa varies in thickness from 0.1 mm. to 0.4 mm.

(Saltzman states that it is impossible to accurately measure the thickness of the lamina cribrosa.) It is made up almost entirely of yellow elastic tissue and is therefore the point of least resistance. Thus the degree of cupping is not dependent upon the intra-ocular pressure, but upon the thickness of the lamina cribrosa and the composition of its constituent elements.

2. There is no positive line of demarcation between a glaucoma simplex and a very mild form of congestive glaucoma. The presence of the so-called lacunar or cavernous atrophy of Schnabel and others found in the optic nerve, which advocates of the glaucoma simplex entity put forth to prove their contention is also seen in myopia. Stock found the same lacunae in eight cases of myopia. We are all more or less satisfied that advancing myopia is due to disease of the sclera. In other words, we again have the factor of the intra-ocular pressure greater than the resistance. The fact that the congestive type of glaucoma is never seen in myopia is most significant. Therefore, is it not conceivable that these lacunae which are first seen as tiny clear spaces in the lamina cribrosa and in the optic nerve tissue and are thought to fuse and form larger cavernae are the result of the pressure with the eventual pressure atrophy. Schnabel contended that the cupping in all cases of glaucoma was so formed. The fact that the lamina cribrosa may almost entirely disappear or may bridge across the cup like a cord or lie back against the optic nerve trunk is worthy of record.

Summary:

1. Non-congestive and congestive glaucoma is one and the same disease. The difference being only one of degree.

2. The cupping is not in direct ratio to the pressure, but largely dependent upon the thickness of the lamina cribrosa and the nature of its component elements.

3. The presence or absence of congestive symptoms is entirely dependent upon the congenital or pathologic anatomic state and the degree of intensity of the precipitating factors.

4. In glaucoma simplex the absence of congestive symptoms is entirely due to a very thin distensible lamina cribrosa plus the very mild exciting factor or factors, the lamina cribrosa acting as a sort of compensatory valve to this mild transient precipitant.

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THE SURGICAL TREATMENT OF GASTRIC AND DUODENAL ULCER, WITH A NEW METHOD OF PYLOROPLASTY.*

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The types of operation for gastric ulcer have varied from simple gastroenterostomy to partial gastrectomy.

It is a well-known fact that those patients who have had their ulcers excised make a better recovery and remain free from symptoms, while those who have simple gastro-enterostomy without removal of the ulcer have a more protracted course of symptoms after operation and many of them show very little improvement.

When gastroenterostomy was first employed about thirty years ago, it was thought by those who performed this operation that it would produce drainage from the stomach to such an extent that all the food would pass through this opening and none through the normal pylorus. Since then many advances have been made in our knowledge of the physiology of the stomach, and also in the pathology of ulcer, through fluoroscopic and roentgen-ray examinations. In all these studies it has been proved that a stomach with a gastroenterostomy functions in an entirely different manner from that intended by the original operation; namely, that instead of the food passing through the gastroenterostomy opening, about 50 per cent or less pursues this course, while the larger amount still passes through the normal pyloric opening. Simple gastroenterostomy for gastric ulcer is of very little value because practically all the food that passed along the lesser curvature before operation continues to do so following operation. By far the most important contra-indication for gastroenterostomy is the fact that it is impossible to tell without microscopic examination whether a gastric ulcer is malignant or benign. Surely no one would advocate a simple gastroenterostomy, leaving a malignant ulcer on the lesser curvature, when this ulcer can be quickly and safely removed by a simple method of excision.

The advocates of simple gastroenterostomy for lesser curvature ulcer claim that there is regurgi-

tation of bile through the gastroenterostomy opening into the stomach, which has a curative value in healing the ulcer by reducing the acidity of the stomach. When we consider the physiology of digestion in its relationship to the flow of bile, this theory of regurgitation and reduction of acidity becomes very doubtful. The bile and pancreatic secretion mixes with the 50 per cent or more of food which comes through the pylorus. This passes on into the jejunum and not through the gastroenterostomy opening. Practically no bile can regurgitate into the stomach during the process of digestion and the only time bile may regurgitate into the gastroenterostomy opening is at night when the patient is at rest, and the stomach is empty. We know that when the stomach is empty the bile flows back into the gall-bladder instead of flowing into the duodenum, and the gall-bladder only discharges its bile into the common duct when there is a reflex stimulus produced by food passing through the duodenum. Furthermore, if enough bile were to pass through the gastroenterostomy to produce a curative effect, such an amount of bile would nauseate the patient and give symptoms of a vicious circle. While the acidity is somewhat reduced following gastroenterostomy, the change is not sufficient and the clinical results are not good enough to warrant the employment of simple gastroenterostomy for the relief of gastric ulcer.

In my opinion, every gastric ulcer, no matter where located, can be and should be excised. If the conditions are such that excision is impossible then the ulcer should be totally destroyed by cauterization. In addition to the excision or the destruction of the ulcer I believe a pyloroplasty should be performed, instead of gastroenterostomy, in order to give the stomach a quick emptying time. These opinions are based upon the following fundamental facts:

There is no means of ascertaining by the history, clinical or laboratory findings, fluoroscopic or roentgenray examination, whether such an ulcer is benign or malignant. The only means that we have at our command for determining the nature of the ulcer is microscopic section. Thalheimer and Wilensky have shown, by making serial sections of several hundred gastric ulcers, that a large number of these lesions which were thought to be benign from examination of a single section were malignant. In many in-

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stances they found the malignant area to be no larger than a pin-head or a split pea. In not a single instance did they find any evidence of malignancy one centimeter beyond the area of infiltration in the stomach wall. This emphasizes the fact that if an ulcer is excised for a centimeter or two beyond the indurated area, you have performed as radical a removal for practical purposes as though half of the stomach had been removed by partial gastrectomy.

In excised ulcers it is possible to demonstrate micro-organisms just as in an infected gall-bladder or appendix, and recent researches seem to prove that these ulcers are localized infections. Therefore, the same surgical principles that hold good for excising the gall-bladder or removing the appendix should hold good for removal of these lesions in the stomach.

In a series of nineteen patients who had a marked hyperacidity before operation, all had a normal or subnormal acidity following excision and pyloroplasty. This demonstrates my contention that the ulcers caused the hyperacidity and hypersecretion instead of being the result of this hyperacidity and hypersecretion. This fact also supports the theory that these gastric ulcers are localized infections.

By performing a pyloroplasty in conjunction with ulcer excision, instead of gastroenterostomy, we give the stomach a quick emptying time—about half that of normal, which prevents hyperacidity and continued hypersecretion and leaves the stomach and duodenum in their normal anatomic and physiologic relationship. Many surgeons when excising ulcers on the lesser curvature have performed gastroenterostomy in addition, to prevent pylorospasm which delayed the emptying time of the stomach. I am sure that gastroenterostomy is entirely unnecessary to prevent pylorospasm. This can be accomplished by a simple pyloroplasty in which a small portion of the sphincter muscle of the pylorus is removed. This relieves the spastic condition of the pylorus, does away with its sphincter control and allows the stomach to empty in about half its normal time. I have practised this for the last five years and have had no occasion to resort to gastroenterostomy for the purpose of relieving pylorospasm.

In favor of this operation are the facts that by excising the ulcer and only removing the pathologic tissue the patient is relieved of his

lesion and the stomach is left intact to carry on its important normal physiologic function. The combined operation of ulcer excision and pyloroplasty requires less time than gastroenterostomy or any other type of operation, it takes less surgical skill and produces less shock to the patient.

The clinical course in a large number of cases that I have operated on by this method has been most satisfactory. The patients are placed in Fowler's position as soon as they are out of the anesthetic; they have no gas pains, and none of them vomit or have any gastric distress. They are not allowed anything by mouth for forty-eight hours, but receive one quart of saline or 5 per cent. glucose solution intravenously and one quart of 5 per cent. glucose in divided doses per rectum every twenty-four hours for two or three days. I do not allow water by mouth for forty-eight hours because, first, withholding the water keeps the stomach dry and prevents nausea and vomiting; second, experimental work on dogs demonstrates that the early administration of water interferes with healing because of the fact that the stitch holes in the sutured area become water-soaked, although leakage does not occur. At the end of forty-eight hours the patients are allowed milk and cream in one and two ounce doses; on the fifth day a light, soft diet is permitted; on the eighth day a soft diet and at the end of the second week a full diet is given.

I do not give sodium bicarbonate or calcined magnesia. The patient needs no medical care or special diet because he has now a normally functioning stomach. The only symptom that these patients complain of at first is marked hunger, which is probably due to the rapid emptying of the stomach. It is interesting that all these patients that have been followed up have gained very rapidly in weight and are able to eat all kinds of food. Fluoroscopic examination four years after operation showed that they all have an emptying time from one and a half to three hours. I believe this is an important factor and explains why these patients are free from gastric symptoms without medical aid or alkalies. At a recent laparotomy on a patient for ventral hernia whom I had operated on five years ago for gastric ulcer, the pyloroplasty was shown to be in exactly the same condition as when first performed, and the fascial transplant

used at the site of excision was perfectly intact.

From a consideration of the above statements it is readily seen that ulcer excision is the only logical procedure for the relief of this condition, and in my opinion simple excision in conjunction with pyloroplasty is far superior to partial gastrectomy. The latter operation produces far more shock, requires more time and, most important, removes a large portion of one of the most essential organs in the body, giving a much higher mortality.

The operation which I employ has no greater mortality than appendectomy or herniotomy. The technic is as follows: a ligature is placed upon the gastric arteries of the lesser curvature well beyond each end of the indurated area. An elliptical incision is then made around the indurated area of the ulcer through the muscularis down to the mucosa. A scalpel is then placed between the mucosa and muscularis and several strokes around this area frees the mucosa from the muscularis so that it balloons up like a pouch. The indurated area is then free and one can see the normal mucosa which has been freed with the scalpel beyond the indurated area. A stomach clamp is then applied and the ulcer is cut away with fine scissors. The mucosa is carefully examined and any portion which looks pathologic is trimmed away. The mucosa is then closed separately with a Connell suture and reinforced by a Lambert suture. If the ulcer is of small size the muscularis can be closed by simple edge-to-edge suture and the omentum brought over this area, but when the ulcer is of large size it would be very difficult to bring the muscularis together without producing a marked deformity of the lesser curvature. For this reason an oval-shaped piece of fascia lata is removed from the thigh and is imbricated between the mucosa and the muscularis. This is accomplished by simple over-and-over suture.

The next step is the pyloroplasty. The pyloric portion of the stomach is grasped between the thumb and index finger; an incision is made one inch in length from the pyloric ring back upon the pyloric antrum. This first incision goes through the muscularis down to the mucosa. A scalpel is then placed between the mucosa and muscularis in order to free the mucosa from the muscularis. A second incision is made at right angles to the first, going through the

muscles of the pyloric ring down to the mucosa. A triangular portion of the free edge of the pyloric ring muscle is cut away, leaving a window of mucosa. The entire area, both ulcer and pyloroplasty, is covered by the free edge of the omentum. I consider the bringing over of the free edge of the omentum one of the most important and vital portions of the operation. I showed six years ago in my experimental work on dogs that the omentum not only prevents leakage and hemorrhage, but establishes a new blood supply and collateral circulation to the transplant and that portion of the stomach.

In the surgical treatment of *duodenal ulcer* the same underlying principles that hold good for gastric ulcer, with the exception of carcinoma, hold good for duodenal ulcer. That is, the best treatment for duodenal ulcer is simple excision whenever this is feasible. When this operation is impossible, owing to the location of the ulcer—as for instance, in the posterior wall of the duodenum, or far down in the second portion of the duodenum near the pancreas or common duct, permanent pyloric closure with gastroenterostomy should be performed. If the ulcer is on the anterior wall of the duodenum, two to three inches from the pyloric sphincter, a simple circular incision should be made around the ulcer through the muscularis down to the mucosa. A very fine eye scissor is then taken to cut away the ulcer. The defect in the duodenum thus produced is closed transversely to the long axis of the bowel with interrupted fine cat-gut sutures, first suturing the mucosa and then the muscularis. This is reinforced by a row of interrupted Lambert sutures. A pyloroplasty is performed in the pyloric ring the same as in gastric ulcer, and the entire area is covered with the free edge of the attached omentum.

When simple excision is impossible a combined operation of closure and excision pyloroplasty should be performed using the following technic: the pylorus is grasped between the thumb and index finger. An incision is made through the muscularis down to the mucosa around the ulcer, carrying it through the pyloric ring, and then in the shape of a tongue into the pyloric antrum. A scalpel is then placed between the mucosa and muscularis and several strokes along the line of this incision frees the mucosa from the muscu-

laris, so as to allow the mucosa to balloon out. By means of a fine-pointed eye scissors the ulcer is now cut away. The mucosa of the tongue-shaped flap of the pylorus is then brought forward into the defect and sutured separately, with a Connell stitch. The muscularis is sutured separately with a continuous over-and-over suture. The free edge of the attached omentum is brought over the area operated on and attached with interrupted sutures.

This plastic operation has the following advantages: it removes the ulcer and at the same time destroys the pyloric sphincter, making that area of the stomach much wider and allowing the stomach to empty very quickly. It is very simple and takes only a few minutes to perform.

When excision is impossible, should pyloric closure be performed in conjunction with gastroenterostomy? There are many surgeons who maintain that they get as good clinical results with simple gastroenterostomy as with pyloric closure. This is due to the fact that these men have performed a pyloric closure which only lasts from five to twenty days, after which time the pylorus is again open. Therefore, their clinical end-results are the same in both instances because the pyloric closure did not remain intact long enough to give the patient any benefit, for some of these ulcers require from six months to a year to heal, and some may never heal. Consequently, the only logical form of pyloric closure is the permanent one.

There is certainly a great difference in the clinical course of patients following pyloric closure as compared with patients who have simple gastroenterostomy. This can be easily explained by the fact that this simple closure produces all the underlying principles, absolutely and permanently, that the medical man strives to attain by his treatment of duodenal ulcer, and which he can accomplish only relatively and for short periods. For instance, by starving his patient he prevents food from passing over the ulcer, but he can only continue this treatment for a short time. By giving large quantities of alkalis he prevents hydrochloric acid from passing over the ulcer, but this also, he can only do for relatively brief periods. By giving atropin he relieves the pylorospasm and hyperperistalsis,

but this can only be carried to a certain point on account of tropin poisoning. By performing a permanent pyloric closure, which requires only about ten minutes, food and hydrochloric acid are prevented from passing over the ulcer and all peristaltic waves in the duodenum are interrupted from the point of closure around to the gastroenterostomy.

The technic of pyloric closure consists of making an incision one inch in length from the pyloric ring back upon the pyloric antrum, through the muscularis, down to the mucosa. Two strokes with the scalpel on each side, between the mucosa and muscularis, frees the mucosa sufficiently so that the thumb can be placed under the pylorus and, grasping the edge of the muscularis, the entire muscularis can be everted so that the mucosa lies on the everted muscularis, like a rubber tube. It can then be easily shelled away and separated with a sharp scalpel from the muscularis. A free fascial transplant from the fascialata is then sutured around the mucosa with heavy waxed silk sutures, forming a tight cuff, the mucosa is dropped back and the muscularis is closed with continuous fine catgut suture. The area operated on is covered with the free edge of the attached omentum of the lesser curvature.

In regard to the relation of the medical and surgical treatment, I believe that duodenal ulcer is primarily a medical condition and that every patient with a duodenal ulcer should have at least one period of thorough medical treatment before surgical measures are considered. I do not believe the same can be said regarding gastric ulcers. I believe that gastric ulcer is primarily a surgical condition because there is no means by our present methods of diagnosis of telling whether the ulcer is benign or malignant, and I do not think there is any medical man who would care to go on record as being willing to treat a malignant ulcer medically. Furthermore, when one considers the mortality of gastric ulcer during or following medical treatment of unrecognized carcinomatous ulcer, perforations and hemorrhages of ulcers, and compares them with the low mortality of simple excision of these ulcers, the advantage of surgical treatment is easily recognized.

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BIBLIOGRAPHY.—PRE-CANCEROUS STAGE.

- Cancer Decalogue: Month. Bull. Mass. Dept. Health, Bost., V. 326.
- Pusey: Symposium of Carcinoma. Inter. Clin. Phil. 1918, s., IV, 292-5.
- Sippy: Symposium of Carcinoma. Inter. Clin. Phil. 1918, s., IV, 292-5.
- Wells: Symposium of Carcinoma. Inter. Clin. Phil. 1918, s., IV, 292-5.
- Bevin: Symposium of Carcinoma. Inter. Clin. Phil. 1918, s., IV, 292-5.
- Ries: Symposium of Carcinoma. Inter. Clin. Phil. 1918, s., IV, 292-5.
- Oertel: Degen. Senescence and New Growth. J. Med. Research, Bost. 1918-9, XXXVIII, 485-93.
- Moran: Carcinoma and Trauma. J. de med. de Par. 1918, XXXVII, 12.
- Ewing: Neoplastic Diseases, a text book on tumors. Phil. 1919.
- Field: False teeth as a cause of carcinoma. Med. Rec. N. Y. 1919, XCV, 275-7.
- Cook: Carcinoma: general mechanical principles. Ibid, 223-9.
- Curtis: Etiol. of lingual cancer. Lancet, Lond., 1919, I, 123.
- Power: On carcinoma of the tongue. Med. Press. Lond. 1919, n, s. CVII, 23.
- Lesieur: Ca latent de l'estomac. Paris med. 1918, XXIX, 64.
- Eunike: Trauma & Ca. Deutsche Ztschr. f. Clin. 1918, CXLVII, 271-6.
- Gilman: Epithelioma of lower lip. J. Cutan. Dis. Chi. 1919, XXXVII, 276.
- Martin: Some Roentgen-ray evidence related to the etiol. of Ca. Am. J. Roent. N. Y. 1919, VI, 180-7.
- Lichty: The incidence of peptic ulcer and Ca. in the duod. N. Y. State J. M. 1918, XVIII, 433-6.
- Heiman: Uterus carcinom and streptokokken. Berl. klin. Wehnschr. 1918, LV, 183.
- Mayo: The cancer problem. Canad. Proct. & Rev. Toronto, 1918, XLIII, 39.
- Grausman: Ca. of the breast. Inter. Clin. 1918, 28, s., IV, 66.
- Bowen: Ca. of the skin. Ohio M. J. Columbus, 1919, XV, 11-13.
- Farr: Delay in the treatment of Ca. Am. J. M. Sc. Phil. 1919, CLVII, 34.
- Moreau: Ca. & traumatisme. J. de med. de Par., 1918, XXXVII, 12.
- Quigley: Ca. of the face. Urol. & Cutan. Rev. St. Louis, 1919, XXIII, 21.
- Lathrop & Loeb: Further investigations on the origin of tumors in mice. J. Exp. M., Balt., 1919, XXIX, 475-500.
- Matsumoto: Angioma in hyperkeratosis. Urol & Cutan. Rev. St. Louis, 1919, XXIII, 24-8.
- Vineburg: Fibroid tumor associated with adeno-carcinoma of the uterus. Am. J. Ob. N. Y. 1919, LXXIX, 147-52.
- Head: Primary carcinoma of the 3d portion of the duodenum. Am. J. M. Sc. Phil. 1919, CLVII, 182-9.
- Tottenham: Theory of malignancy. J. Roy Nav. M. Serv. Lond. 1919, V, 109.
- Carstens: What everyone should know about Carcinoma. J. Mich. M. Soc. 1919, XVIII, 145.
- Lewis: Carcinoma. Med. Press, Lond. 1919, n. s. CVII, 142.
- Simpson: Carcinoma of tongue. Surg. Clin. Chi. 1919, III, 63-7.
- Levin: The carcinoma problem. A chap. in medicine. Med. Rec. N. Y. 1919, XCV, 551-8.
- Petty: Hot liquids and cancer. Lancet, Lond. 1919, I, 583.
- Deaver: Early recognition of cancer of the stomach. N. Y. M. J., 1919, CIX, 749-51.
- Gilman: Leukoplakia of the mouth and epithelioma of the tongue. J. Cutan. Dis. Chi. 1919, XXXVII, 277.
- Waugh & Mackey: Carcinoma of palate. Ibid, 265.
- Barringer: Carcinoma of the kidney. Internat. J. Surg. N. Y. 1919, XXXII, 402.
- Mac Carty: Biological conception of neoplasia. Am. J. M. Sc. Phil. 1919, CLVII, 657-74.
- Woglom: Virulence or adaptation. J. C. R. Balt. 1919, IV, 1-18.
- Benedict: Speculations regarding the nature of cancer. A., J. M. Sc., Phil. 1919, CLVII, 742-50.
- Bryant: Carcinoma problem. Boston M. & S. J. 1919, CLXXX, 576-80.
- Ross: Occupational carcinoma. J. Carcinoma Research 1918, III, 107-26.
- Bayer: Primary carcinoma of the appendix. Review of literature. Am. J. M. Sc. Phil. 1919, CLVII, 775-82.
- Cazin: Traumatismes and cancer. Paris chir. 1918, X, 293-5.
- Goodpasture: Old age in relation to cell-overgrowth and carcinoma. Johns Hopkins Hosp. Rep. 1919, XVIII, 4-6.
- Wood: Immunity in Ca. Tr. Ass. Am. Physicians, Phil. 1918, XXXIII, 128-2.
- Thom: Carcinoma and syphilis. Am. J. Syphilis 1918, Jan.
- Morton: Etiology of carcinoma. Glasgow M. J. 1917, Dec.
- Dutton: Etiology of carcinoma. J. Okla. M. A. 1918, Jul.
- Etiology and prevention of carcinoma. Shannon Med. Rec. 1918, Sept.
- Yamaguira: Pathogenesis of carcinoma. J. Car. Res. 1918, Jan.
- Abell: Precancerous lesions. Ky. M. J. 1918, May.
- Barkley: Precancerous lesions and increase of carcinoma. Ibid.
- McCullough: Predisposing causes of carcinoma in women. Ohio State M. J. 1918, July.
- Mayo: Carcinoma problems. Canad. M. Asso. J. 1918, Sep.
- Berard: Trauma of war and carcinoma. Bull. Acad. de med. Par. 1918, Jul.
- Goodpasture: Old age and tumors. J. M. Res. 1918, May.
- Lazarus-Darlow: Trauma and malignant disease. Brit. M. J. 1918, Mar. 31.
- Mayo: Stomach carcinoma. Surg. Gyn. and Ob. 1918, April.
- Ochsner: Stomach carcinoma. Surg. Gyn. and Ob. 1918, April.
- Mix: Stomach carcinoma. Surg. Gyn. and Ob. 1918, Oct.
- Chase: Carcinoma: can we prevent it? J. Maine M. A. 1918, Jan.
- Remien: Early diagnosis of carcinoma of stomach. Ill. M. J. 1918, Mar.
- Wilensky: Etiology relation of benign ulcer to carcinoma of stomach. Ann. Surg. 1918, Feb.
- Game: Incipient carcinoma of stomach. Abstr. July 26, 1918, A. M. A.
- Ewing: Relation of gastric ulcer to carcinoma. Ann. Surg. 1918, June.
- Smith: Relation of ulcer to malignancy. J. Kansas Med. Soc. 1918, Feb.
- Montgomery: Etiology of lip-cancer. J. Cutan. Dis. 1918, Nov.
- Dickinson: Malignant disease of the throat. Penn. M. J. 1918, Jul.
- Harris: Etiology and pathology of skin-cancer. J. Cutan. diseases, 1918, Feb.
- Byford: Notes on etiology and prophylaxis of carcinoma. Tr. West. Surg. Assn. 1915, Minn. 1916, 233-46.
- Brown: Rep. of Amer. Sec. for control of carcinoma. Tr. Am. Gyn. Soc. Phil. 1916, XLI, 557-84.
- White: Carcinoma of the pancreas. Guy's Hosp. Gaz. Lond. 1916, XXX, 452-9.
- Stone: Precancerous changes in the uterus. Tr. Am. Gyn. Soc. Phil. 1916, XLI, 470-93.

ENURESIS*

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Enuresis is the involuntary emptying of the bladder. This act may be normal or it may be abnormal. To know the abnormal we must know the normal, and to know the normal we must know the mechanism of micturition.

The bladder has two muscles; the bladder muscle or detrusor and the sphincter. Both receive their nerve supply from segments of the third, fourth, and probably fifth sacral nerves. The motor centers keep the sphincter contracted and the detrusor relaxed. When the bladder becomes filled, the sensory nerves carry sensory impulses to the sensory centers in the cord. These sensory centers are connected with the motor centers by association fibres and when the motor centers become sufficiently irritated, the detrusor contracts, the sphincter relaxes, and the bladder is emptied. This act is made easy by the strong detrusor, the weak sphincter, and the sensitive nervous system.

In infancy the act of urinating is a reflex one. Later the spinal centers are controlled by cerebral centers. The time when this control is established depends largely upon the condition of the nervous system and upon training. If this control is not established by the end of the third year, there is true enuresis.

Omitting organic brain disease, the predisposing cause of enuresis is irritability of the nervous system. This irritability may be hereditary or it may be acquired. Hereditary, when parents or other members of the family give a history of having had enuresis or any form of functional nervous disease; acquired, through any condition causing increased irritability of the nervous system.

The exciting cause of enuresis is in the urinary tract or outside of the urinary tract. If in the urinary tract, it is in the urine or in the urinary organs. If outside of the urinary tract, it is close by or remote. If in the urine, there may be concentration, hyperacidity, alkalinity, or bacteriuria. If in the urinary organs, there may be disease, injury, malformation, new growth, or foreign body. If the cause is outside of the urinary tract and close, there may be constipation, seat worms, fissure of the anus, prolapse of

the rectum, pruritus, or pressure anywhere along the urinary tract. If the cause is outside of the urinary tract and remote, we may have any condition causing increased irritability of the nervous system, especially anemia, tuberculosis, diabetes, enlarged tonsils and adenoids, and spinal lesions.

C	{	In ur. tr.	{	In urine: conc., hyperac., alk., bact.
				In ur. organs: dis., inj., malf., new gr., for. body.
	{	Outside	{	Close: const., worms, fiss., prol., pruritus, pressure.
				Remote: Incr. irrit., an., tbc., diab., enl. tons., spinal les.

There are cases of idiopathic enuresis, but a systematic search will usually bring out some cause for this condition. Treatment is successful only when the cause is known.

When giving large quantities of fluids in concentrated urine, keep the body cool to prevent perspiration.

In hyperacidity bicarbonate of soda gives better results than citrate of potash. To prevent irritation of stomach, give liquid takadiastase before meals.

Bacterial infection is usually due to the colon bacillus. Here vaccines are of benefit. But the colon bacillus found in the urinary tract is different than the one found in the intestinal tract, the one grows in an acid medium and the other in an alkaline medium, therefore an autogenous vaccine must be used.

With bloody urine rule out scurvy and san-tonin.

When enuresis is associated with an acid urine, pus, and epithelial cells, treat pyelitis first. For, if the condition is acute, this means pyelitis; if it is chronic, it is due to calculi or tubercular kidney. If the urine is dark and smoky, there is also a nephritis.

Urinary antiseptics are of no value. The mucous membrane of the urinary tract is so sensitive that the administration of an antiseptic will cause irritation long before exerting any antiseptic properties. Formaldehyde will often cause irritation, inflammation, and hematuria. If there is hematuria and the blood is mixed with the urine, it comes from the kidney; if the blood shows at the beginning of urination, it comes from the urethra; and if it appears at the end of urination, it comes from the bladder. Each calls for different treatment.

Inflammation of the bladder is due to infection. Urethritis is not common, and gonorrhœa

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is rare. The most important treatment is hygienic and dietetic.

In constipation a simple warm water enema at bedtime will stop bedwetting. But do not attempt high colonic flushing.

Seat worms are a common cause. An enema of the tincture of chloride of iron and water, one to four, is of benefit when the worms are confined to the rectum; when they are higher up, use *santonin*.

Anemia causes enuresis, especially in those children who have tubercular glands or general tuberculosis and in girls about the time of menstruation. Here iron works well when mixed with sunshine. Reduced iron is the best form.

Belladonna is used about as often in enuresis as *arsenic* is in chorea and is almost as often contraindicated. But it is an antispasmodic and is of value in the hereditary form and in those cases of exudative diathesis with a history of eczema or asthma. The most reliable preparation is Lloyd's tincture. Push it to the full physiologic effect; children bear it well. If it helps, there will be some improvement in two weeks.

Strychnine is indicated when there is a relaxed spincter. In these cases you will usually find the rectal spincter relaxed also. This occurs in pale flabby children. Strychnine must be used cautiously in childhood, and never in infancy.

With increased irritability of the bladder, when all else fails, try minute doses of *cantharides*.

There is a class of cases in which enuresis is due to some defect of the ductless glands. These children are usually of the short squatty type and bear organic extracts well. The dry thyroid gland is better than the extract. A long lean lanky physique is a contraindication for the use of any organic extract.

Epidural injections of normal salt solution, hypnosis, *ergot*, electricity, *hyoscyamus*, *grindelia*, and *rhus* have come and gone.

There are cases in which the muscles of the back are tense with tender points along the spine. These cases are benefited by manipulation and the *salicylates*. This is the class of cases often relieved by the osteopath.

In the hereditary form where a child is being raised in an atmosphere filled with mother's whines and father's bursts of anger, the training is also faulty. Punishment is often resorted to. Corporal punishment is always harmful and usually aggravates the condition. These cases

do well when taken away from home. The mountain side will do wonders when the rest of the family is left at home.

There are cases of apparent enuresis. These are due to shamming. They occur in older children about the time they are sent away to school. They develop nostalgia and resort to this method in trying to be sent home. These cases can be detected by having the child urinate: in a true enuresis there is never a full stream, the quantity voided at one time is small, the meatus is moist, the clothing is stained, a catheter or cystoscope will show residual urine in the bladder, and when they wet the bed, they do so early in the evening. In shamming the bed is wet in the morning before rising. The condition is cured when the diagnosis is made.

Give written instruction regarding diet, time for meals, and time to be consumed at every meal. Do not restrict fluids, a concentrated urine is just as irritating as a full bladder. Remember the four don'ts: nothing fried, no pastry or sweets, nothing strongly seasoned, no coffee or tea.

Preach the gospel of cleanliness. Inquire not only about the personal cleanliness, but about the cleanliness of the bed, bedclothes, and bedroom. Dirty linen and vermin may cause enough irritation in the susceptible to cause wetting. Insist upon a hard mattress without a spring, to prevent motion during sleep. Have few bedclothes, a heavy blanket acts like a hot water bottle over the bladder.

Cerebral inhibition is at its lowest during sleep, therefore the nocturnal form of enuresis is the most common. Sleep is most profound during the second hour, therefore wetting occurs most frequently during the first two hours after retiring. Instruct the mother to watch and see how long after retiring the wetting occurs, then take up the child prior to this time.

Wetting occurs most frequently when a child sleeps on its back. Make a wide bandage with a baseball sewed into it and fitted so that the child will be awakened by pressure as soon as it turns on to its back.

We often hear glowing reports regarding a certain remedy. The author becomes very enthused when relating the virtues of his newly found drug. He tells his friends and his enthusiasm is taken up even by his patients. And it is this very enthusiasm which is his strongest remedy,

because it acts as a suggestion. Suggestion is a powerful remedy in the treatment of children: they will often yield to it when all drugs fail. It is the means for gaining their cooperation. And when we have their cooperation, and a strong suggestion, it is easy to appeal to their pride. And when you have touched their pride, you can safely promise a speedy reward.

*REFERENCES

- Allis: N. Y. Med. Journal, 22 Feb. 1919.
 Bosworth, M. C.: Enuresis, J. A. M. A., 15 Feb. 1919.
 Brahdy, L.: Annals of Surgery, Oct. 1919.
 Caro, H.: Idiopathic Enuresis, J. A. M. A., 15 Feb. 1919.
 Chapin and Pisek: Diseases of Children.
 Cumston, C. G.: Intern. Clinics, 1919.
 Dunn, C. H.: Pediatrics.
 Jennings: Forcheimer.
 Jones and Llewellyn: Malingerling.
 Johnson, F. H.: The Practitioner, May 1919.
 Kirchberg: Deutsche Med. Wochenschrift, 3 April 1917.
 Mikhallaw, N. A.: Urol. and Cutan. Review, Oct. 1917.
 Pelzman, I. A.: Mil. Surgeon, April 1919.
 Pfandler and Schlossman: The Diseases of Children.
 Piske, G. G.: Med. Clinics of N. A., Sept. 1919.

EMPHYEMA: DAKIN—CARREL TECHNIQUE*

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While in the army in 1918 at General Hospital 14 at Fort Oglethorpe, George, we were engaged in finding some surgical solution for the treatment of empyema. The influenza epidemic was raging and the boys who could survive it died many times of pneumonia or empyema. The death rate from empyema, especially at operation or right after, was so appalling that the U. S. government appointed an empyema commission, whose function it was to find some surgical procedure that was less of a shock in these cases and would reduce the mortality of the old rib resection that was being done with such frightful results. All the Army Hospitals in this country and abroad were working to find some improvement on the old costectomy on these early cases. The activity and enthusiasm of the empyema commission and the men who were engaged in empyema work was very remarkable. Every Army Hospital was sending in its results to the Surgeon General, and he in turn had them printed in pamphlet form and redistributed. I am not going to tell you of the variety of treatments that were reported but instead I am going to tell you what we did at General Hospital 14 under Colonel Edward Martin of Philadelphia.

The cases were transferred to us from the medical department when it was necessary for surgical interference. They were again thoroughly

examined by medical men who were attached to the empyema department. The diagnosis was confirmed by means of the x-ray and exploring needle. The exudate was examined as to bacteria and a bacterial count made.

Many of the cases were treated by aspiration 5 or 6 times before a thoracotomy was done.

The thoracotomy was performed under local anesthesia, 1.5 per cent. novocaine solution. The field was prepared by washing thoroughly with neutral soap and water, dried and painted with a 5 per cent. solution of Dichloramine T. This solution was freshly prepared and accurately titrated.

The point of election was usually in the 7 or 8 interspace in the anterior, middle or posterior axillary fold, but many times we had to make our incision in other places, the angle of the scapula, etc.

An incision of about $\frac{5}{8}$ of an inch was made through the skin down to the intercostal muscles, then a very slight incision, more of a puncture, was made in the opposite direction, through the intercostal muscles and the parietal pleura into the empyema cavity. At the same time a rubber tube $\frac{5}{8}$ of an inch in diameter, held by a hemostat was forced through the incision into the cavity a distance of 3.5 inches. The distal end of the tube was clamped off.

The tube that we inserted between the ribs was $\frac{5}{8}$ of an inch in diameter with a $\frac{3}{8}$ lumen, giving the tube wall $\frac{1}{8}$ of an inch in thickness, and 18 inches long.

A flat cork of 1.75 inches in diameter was punched out in the middle for the tube to fit through, so when the tube was inserted into the cavity the cork would fit tight against the chest wall making it air tight. Two silk worm sutures were passed through the skin on either side of the tube and tied bringing the skin tight around the tube and the long ends of the sutures were crossed and tied over the cork fastening it sure to the chest wall.

After the tube is properly fixed in the empyema cavity which takes less than 5 minutes, then the distal end of the tube is connected to another tube that contains a 3 foot column of water and empties into a Wolf bottle. The clamp is removed and siphonic drainage is established. The drainage is continued until the patient starts coughing or becomes cyanotic, when the tube is clamped off again and the patient taken back to the wards.

*Read Before the Evanston Branch of Chicago Medical Society.

In almost every case we would drain off a 1,000 or more cc of pus in the operating room.

After 24 hours the patient was irrigated with Dakin solution every two hours in day time and every four hours at night. At each irrigation 25 cc to 150 cc of Dakin solution was run into the cavity and it was allowed to remain for a half hour when it was siphoned off. The Dakinization of all the empyema cases was continued until we were able to get three negative bacterial counts in succession.

We considered a bacterial count negative or a surgical sterility when the count showed 1 bacterium to 5 fields. The French consider surgical sterility when you get 1 bacterium per field. Bacterial counts were made on the exudate every other day. The bacterial count of 60 or over per field we called infinity.

The Dakin solution we used on all our cases was a true Dakin solution, prepared freshly every day, alkalinity thoroughly corrected to an alcoholic phenolphthalein solution of 1 per cent and accurately titrated with a decinormal sodium thiosulphate solution to .48 per cent sodium hypochlorite.

All the time the patient was under treatment his blood pressure was taken daily. It was very interesting to note that they all ran a very low systolic and diastolic pressure with a very high pulse pressure. It was the typical thing to have a systolic of 90 and a diastolic of 20, showing a pulse pressure of 70.

The blood was analyzed twice a week and oftener if necessary. The blood picture was of no particular significance. A very complete record and systematic routine was carried out in every case: The aspiration record gave location of puncture, how much fluid was withdrawn, character of pus, kind of bacteria and bacterial counts; drainage records gave the quantity, appearance and time; irrigation records, x-ray reports, fluid and food intake (calories for 24 hours) fluid output, urinalysis, bowel movements, temperature, pulse and respiration, also daily inspection of the sacrum, etc.

Our dressings were done in the usual aseptic manner but we always had the tube and cork padded and covered with compresses soaked in Chlorocosane (chlorocosane is a chlorinated paraffin wax) which protected the skin from irritation by the Dakin solution. Chlorocosane would absorb any excess chlorine. Vaseline com-

presses would answer the same purpose. Vaseline compresses are made with 91 parts vaseline, 6 parts paraffin and 3 parts resin.

When we were able to get a negative bacterial count (surgical sterility) three times in succession the tube was removed and the cavity irrigated twice daily for about a week with Dakin solution. We then made daily bacterial counts. If the case still remained sterile we filled the cavity with a 5 per cent solution of dichloramine and did a secondary closure. If the case did not remain sterile we would reinsert the tube and continue Dakinizing. Of the 200 and some cases treated in this way every single case made an uneventful recovery in an average of 8 weeks with the exception of two cases, one of which died 12 hours after operation, and the other developed a suppurative endocarditis.

X-ray pictures were taken every week and oftener if necessary at the bedside, also fluoroscopic examinations showing the position of the tube, retraction of the lung, area of pus and the amount of pneumothorax.

Every case had daily breathing exercise and also used blow bottles.

The bacterial findings in all our cases were pneumococci, streptococci, staphylococci and pneumococci streptococci combined.

ANDREWS OPERATION FOR INGUINAL HERNIA WITH REPORT OF 316 CASES AND MODIFICATION OF TECHNIC*

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Herniotomy furnishes one of the more interesting surgical procedures.

In the pre-antiseptic era several attempts were made by various operators with rather discouraging results.

The advent of asepsis did not at first much improve the operative results, the death rate ranging between 6 and 7 per cent and the recurrences averaging about 40 per cent within the first year, thus bringing the operation into disrepute.

The operative reports of Bassini and Halsted with their methods based as they were on a rational etiologic and anatomic basis soon revived the operation until it has now become one

*Read before Chicago Medical Society, April, 1920.

of the most uniformly successful of surgical procedures.

The aim of all herniotomies is, of course, to obliterate the hernia channel and prevent its recurrence by enclosing the cord with the surrounding structures.

Tissues directly involved in the operation, surgically speaking, are the internal oblique, the conjoined tendon, the aponeurosis of the external oblique, the cord and the sac; and the ease or the difficulty by which the operation may be performed depends upon the relation between these and the condition of their structure, and this especially concerns the internal oblique and the aponeurosis of the external oblique. If these latter are very deficient, then tissues adjacent to the hernial region such as the rectus abdominalis and fascia lata must be brought into the field.

Numerous methods only slightly deviating from each other have been reported in the literature. The difference between these appears in the handling of the sac, the placing of the cord, the manner of suturing the internal oblique and the aponeurosis of the external oblique and by the use of extra inguinal structures.

Among all these various modes there are a few that stand out in prominent relief. These are the methods of Bassini, Halsted, Kocker, Ferguson and Andrews; the others are practically modifications of, or combinations of, above methods.

The Andrews operation with the possible exception of the Bassini is undoubtedly the herniotomy that has the greatest number of adherents.

I had the wonderful opportunity to work under Dr. Andrews, a great master and a herniotomist second to none.

My gratitude to him is inexpressible and the larger the experience the greater becomes the appreciation, so naturally most of my cases were done by his method.

TECHNIQUE OF ANDREWS' OPERATION AND HERNIOTOMY IN GENERAL

Incision is the ordinary oblique one.

Andrews lifts the skin in cutting through.

If you open carefully, the main vessels will not be injured, and will be seen standing out prominently in the subcutaneous tissues. They should be clamped before cutting.

In double hernia I have often used the transverse incision of Judd to good advantage.

The aponeurosis should be scrupulously exposed from overlying areolar tissue and then incised between its fibres. The lower shelf is dissected free down to Poupart's ligament. The ilio-inguinal and ilio-hypogastric nerves should be carefully avoided.

The cremasteric fascia enclosing the cord and sac are then separated from the surrounding structures and incised near the internal ring for the purpose of exposing the sac which in indirect hernias is found between the vessels and the vas deferens.

In simple cases the sac is easily exposed and separated from the cord by the use of gauze sponges.

When the adhesions are very dense rather than to traumatize the cord and rupture its vessels it is advisable to cut the sac at its neck and leave it with its end open. If tied it is liable to form a hydrocele. Even when open that may happen as it did in one of my cases. The isolation of the sac may be facilitated by cutting into it at its neck and introducing the index finger for guidance.

Surrounding the cord at the internal ring you often find lumps of fat. They should be ligated and excised.

The neck of the sac should be carefully freed and ligated high up.

The stump might be transfixed to the under surface of the internal oblique.

In direct hernias when the sac is small it is best just to turn it in and keep it turned in by a running cat cut suture. In these direct hernias the sac should be opened with the utmost care as here you are apt to find a herniated bladder.

In isolating and in separating adherent structures from the interior of the sac one may easily tear its wall, the slit running high up around the neck.

Such a torn sac should be carefully ligated above the slit, otherwise when stump is released omentum will appear through the rent and at once you have the beginning of a new hernia.

Contents of sac, if not adherent, are as a rule easily reduced. At times, however, there may be some difficulty and then reduction may be facilitated by twisting the sac as advised by Judd.

In cases with large hernias in which there are extensive adhesions between the loops of

herniated guts and if it seems that there is no dangerous obstruction, it is best to reduce the coils *en masse* rather than to separate them and possibly invite a more serious condition.

In several cases I have done this without untoward results. Adherent omentum should never be needlessly sacrificed but should, if possible, be reduced in toto. Rents should be carefully sutured for obvious reasons. If resection is imperative the omentum should be tied with the utmost care as hemorrhage from this structure may prove serious.

The muscle suture is of the utmost importance, especially in the direct and the large indirect hernias where there is extensive atrophy of the internal oblique.

The internal oblique and conjoined tendon are brought down to Poupart's ligament either in back or in front of the cord. In some of the simple cases I have left the cord in its place and this should especially be done in cases associated with undescending testicle. In the severe or in fact the great majority of cases it is undoubtedly best to transplant the cord.

In the typical Andrews operation the muscles are caught with the sutures holding the lower flap of the aponeurosis.

The structures must be brought in apposition without undue tension and this cannot be too strongly emphasized.

In cases with great tissue defects this is of the greatest moment; success or failure depending entirely upon proper coaptation.

Any attempt to hold the tissues in place by sheer force depending upon strong unabsorbable ligatures will be rapidly doomed to failure as the suture will cut through in about forty-eight hours.

Nothing is gained by the use of inabsorbable sutures as healing takes place in about two weeks; thus 2-day chromicised cat gut serves the purpose admirably. I have used No. 2 chromicised gut in adult and No. 1 in children.

If the muscle cannot be brought down to Poupart's ligament without too much tension then suture it higher up on the aponeurosis.

The internal oblique can be somewhat dislocated downward by separating it from the overlying aponeurosis of the external oblique and by incising its attachment to the sheath of the rectus.

The real difficult repair comes in the direct and in those large scrotal indirect or direct indirect hernias in old people when the internal ring is placed directly back of the external one. It is in these cases that we do and should have the greatest percentage of failures, as the tissues for reconstruction are often insufficient and their quality below par. The internal oblique is greatly atrophied, the conjoined tendon may be almost obliterated from pressure, overstretching and impaired vascular and nerve supply. The fibres of the aponeurosis may be separated greatly weakening that structure.

Anatomical relations are greatly disturbed, consequently restoration more difficult and its permanency more uncertain.

In these cases the tissues directly involved in the hernia may be inadequate for its repair and then extra hernial structures must be recruited such as the rectus, its sheath or both, or fascia lata.

No matter how bad a case, you as a rule can close the upper part of the canal with the internal oblique; the lower part of the muscle is either greatly atrophied or almost obliterated so as to be of very little or no use.

Then the Bloodgood operation will save the situation.

The rectus sheath should be opened for about 2-3" and then behind the attachment of the internal oblique otherwise you cannot use the latter muscle to its best advantage. The rectus is then easily drawn down to Poupart's ligament without any tension. I use this method in every large hernia with greatly atrophied internal oblique.

In old men with large hernias it might be advisable to resect the testicle or as I did in one case slip the testicle in the peritoneal cavity so as to be able to completely close the abdomen.

The suture of the aponeurosis concerns directly the method in question.

The overlapping of the aponeurosis is the distinguishing feature of the Andrews operation.

This procedure absolutely strengthens the wall, giving it as it does, a double-breasted coat effect.

It gives the sutured aponeurosis a chance to slide without separating, should the late postoperative tension become too great.

In very large hernias it takes up the slack in an

overstretched aponeurosis thus forming a firmer support for the tissues behind than otherwise would be the case.

The question of tension is just as important in the suture of the aponeurosis as it was in the muscle suture and the extent of imbrication must be carefully measured in each case.

In the typical Andrews operation you use mattress sutures passing the needle from without inward through Poupart's ligament then picking up the transversalis fascia, the lower fibres of the internal oblique muscle, the conjoined tendon and then through the edge of the upper aponeurosis flap; then you reverse the needle a short distance from point of emergence, carrying it through the respective tissues in the reverse order and then through Poupart's ligament, or else directly back through Poupart's ligament. The number of stitches varies with the case. By tying from above you can easily judge the effect in the circulation of the cord. The lower aponeurotic flap is then brought over the upper with a running cat gut suture. Andrews leaves the cord in front as a rule.

In using mattress sutures I sometimes noticed that after having tied these sutures the upper flap did not quite approximate the lower one, so instead I raise the lower flap and use a running suture starting from the pubic end along the posterior surface of the raised flap to the upper end, then running back with the same thread overlapping the aponeurosis and tying it to the loose end of the beginning.

PROPHYLAXIS AND AFTER TREATMENT

Severe coughing followed a herniotomy is of course undesirable on account of the violent spasmodic abdominal contractions associated with it. Thus the patient should be carefully protected especially in going to and from the operating room.

Many a working man sleeps in his underwear and if such a person is brought into the operating room without his undergarments he is very apt to contract a cold with bronchitis or pneumonia following.

If ever a patient should be carefully protected it ought to be during an operation, exposed as he is to pulmonary trouble from the bronchial irritation incidental to inhalation of the anesthetic

and chilling during the trip to and from the operating room.

This applies to all operative cases and care in this respect surely rewards itself in time.

Most of the cases I have kept in the hospital three weeks. Someone has stated that keeping the patient in bed too long favors thrombosis and embolism. That I doubt.

In dogs operated on, next to infection death is due to thrombosis and embolism, undoubtedly caused by the animal moving about too much.

In cases with weakened and insufficient reconstructive tissues postoperative relaxation may be accomplished by keeping the patient in half sitting posture with sharply bent knees, a kind of a reversed question mark position and I believe this has met the issue. Patients were warned not to work hard for 4 to 6 months.

Up until January 1, this year I have operated with the Andrews method or some slight modification thereof three hundred and sixteen cases with five recurrences and no deaths. There were two hundred ninety-four males and twenty-two females; ages between eight and eighty-two, one hundred eighty-eight right and ninety-two left and thirty-six bilateral.

Two hundred thirty-three of these hernias were indirect and eighty-three direct.

I operated on thirty-one recurrences, four of those my own.

There were eighteen strangulated hernias and in two of these intestinal resection was necessary.

Three were associated with undescended testicle; one of these were resected. Part of the omentum was resected in eight cases.

Structures appearing in sac were omentum, small gut, cecum with the appendix, ovary and tube. Femoral vein was injured twice, once by myself and once by an interne.

Postoperative bronchitis appeared in eight cases and pneumonia in two. Swelling of the cord and testicle in fourteen cases, hematoma in four.

Inability to pass urine appeared in quite a number of the cases.

The imbrication method as originally described by Andrews now and then slightly modified can be used in most hernias and is in my estimation one of the best of the herniotomies and throws great credit on its illustrious originator.

TUBERCULOSIS OF THE ABDOMINAL PERITONEUM*

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The genesis of the tuberculous lesion does not differ when located in the peritoneum from that situated elsewhere.

A great number of different classifications have been made: some have been based upon the source of the infection, others upon the forms of the infection, some upon the location of the disease, and others upon the stages of the disease. In many of the cases of different sources, forms, locations or stages of the disease either interchange with each other, or succeed each other in such rapid succession that any consistent classification is impossible, or if made cannot be maintained.

It is our purpose to speak specifically of two different forms of the disease, viz:—the exudative and dry. These may represent a general, localized or military infection, and we must not lose sight of the fact that whether the lesion (manifest) is local or general, we are dealing with a generalized infection that may pass through one or more stages the diagnosis of which is often difficult and, I think, frequently overlooked. We have too often limited our search for evidence of a tuberculous infection to the lungs, and not finding any evidence of such an infection there, place the cause of the existing toxemia, with its symptom complex, in some pyogenic infection.

Broadly speaking, only one form is generally recognized, that is the exudative form, and its recognition usually is brought about by the presence of the exudation. However, it is the so-called dry form that most frequently goes unrecognized. It is our belief that this form of the disease is the most common, notwithstanding the reverse is claimed, in our textbooks, and it is this form, I believe, that is responsible for the frequent formation of adhesions among the abdominal viscera. What could be more natural than that an inflammatory process about the abdominal viscera should be due to a tuberculous infection, with frequent exacerbations followed each time by more and more fibrous tissue formation, in the form of adhesions—the same process

that takes place when we have a tuberculous infection in the thoracic cavity. If the adhesions formed were due to a subacute pyogenic infection, the process would be more rapid in its formation, limited in its duration and the adhesions uniform, or nearly so, in their constituency. On the other hand, have we not often seen adhesions in the same abdomen representing different ages, or stages, of formation? Some that impress us as being old ones, that can only be severed by scissors or knife, and in the same location we will find, what appears to be, new ones or those in the process of formation, distinctly representing a chronic progressive process. This is not characteristic of a pyogenic infection, but is a classic portrayal of a tuberculous infection.

That tuberculous infection takes place during childhood seems to be nearly universally accepted, also that the lymphatic apparatus is the most commonly infected. It is only within the past few years that the important part played by the lymphatic system in relation to tuberculous infection has been fully appreciated. However, opinions differ as to the avenues of infection; one group of authors and investigators believe in the enterogenous mode of infection; another group in the bronchogenous mode of infection. There is abundant experimental and clinical proof that infection may take place through either of these routes, but the comparative frequency of each one is the difficult thing to estimate. It is reasonable to suppose that not a small percentage of the primary infections take place through the intestines, when we consider the frequency of contamination of milk and other foods by the tubercle bacillus and the enormous absorbing surface of the intestinal tract. We know that during the process of digestion, divers protein substances, fatty acids, and glycerin, solid particles and bacteria are constantly entering the intestinal villi. Many investigators have demonstrated that the tubercle bacilli may pass through the healthy intestinal mucous membrane without causing any apparent lesion. Foremost among these, L. Finlay performed a series of experiments to ascertain what part the intestines played as a portal of entry for the tubercle bacillus and he draws the following conclusions—the bacilli can pass through apparently intact intestinal mucous membrane and reach

*Read before the Chicago Medical Society, 1920.

the mesentery glands within a period of six days; the intestines showing no mark of penetration.

Walsham in his work on "Channels of Infection in Tuberculosis" comes to the conclusion that the mesentery glands may be found to be tuberculous without there being any discoverable lesion in the intestines.

Secondary infection usually takes place from swallowing tuberculous mucus which comes from the lungs.

The generally accepted belief that there is in the lungs a predilection for tuberculous infection is not entirely based upon the facts. Further research will, I believe, establish the fact that tuberculous infection within the abdominal cavity is as frequent as it is now known to be within the thoracic cavity. We also venture the belief that many of the lesions, spoken of as gastric and duodenal ulcers, are tuberculous in their character. The fact that the tubercle bacillus has not been found in them is no proof that they are not tuberculous. It has many times been shown that tuberculous laryngitis, with ulcerations, has failed to reveal the presence of the tubercle bacillus in the scrapings; and, on the other hand, how many surgeons and pathologists have studied alimentary ulcerations from this angle? Serous fluid taken from the pleural cavity seldom shows the tubercle bacillus, yet inject this fluid in a rabbit or guinea pig and they will usually promptly develop a tuberculous lesion.

Take the adhesions that are found in the pleural cavity—no one hesitates to associate them with a previous tuberculous infection. Why may not adhesions found in the abdominal cavity be due to a tuberculous infection?

Fibrous bands, when found in the thoracic cavity, are most always attributed to a tuberculous process, but when found in the abdominal cavity are attributed to every conceivable form of infection before a tuberculous infection is considered. We ask, why this difference? We are agreed that fibrous tissue formation in the lungs or pleura represents a healed tuberculous process—why should not fibrous tissue found about the abdominal viscera be the result of a healed tuberculous process?

In the thoracic cavity the tuberculous process frequently goes on for years without being recog-

nized. If symptoms appear they are frequently mild and are attributed to some other cause. Why not a tuberculous infection in the abdominal cavity with mild symptoms going on for years without being recognized? I think that this often occurs and represents the primary tuberculous infection in many cases.

The onset of tuberculosis of the abdominal peritoneum is variable and the disease simulates nearly every disease that the abdomen is heir to. In the early stages the symptom complex of the two forms may be identical, but as the disease advances the picture outlined becomes more distinct and the form of the disease more apparent.

The condition generally is of rather chronic development, and the anamnesis will bear record of some prodromal symptoms, such as general malaise, gastro-intestinal distress, associated with the ingestion of food, migratory pains in the abdomen with tenderness on palpation. These conditions are not constant, but may gradually increase in severity, or may be subject to sudden exacerbations with vomiting, distention and pain, with progressive impairment of nutrition and strength, temperature subnormal or normal, pulse often rapid. These constitute essentially the dry group.

In some cases the presence of exudate is the first sign that presents to the patient the fact that he is ill. He will tell you that he cannot understand his progressive weakness while he is gaining weight. The exudate may be general or localized; tenderness on pressure, checker board dullness on percussion, chills and fever, with occasional night sweats, rapid pulse—frequently intermittent diarrhea—these symptoms and signs represent the exudative form in the absence of or presence of tuberculous disease elsewhere.

Again in the exudative group, opening the abdomen usually stops the recognized tuberculous process. Why not the opening the abdomen to break up the adhesions stop the unrecognized dry tuberculosis process? The more we study the problem of tuberculous infection and tuberculous disease, the more fixed becomes the belief that there is much to be desired in knowledge of their devious ways. The presentation of these views, we hope, will stimulate interest in this subject.

THE EYE IN RELATION TO DISEASES OF THE NOSE, THROAT, AND TEETH*

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I have many times tried to formulate a concept of what an oculist should be, and I am not yet ready to reduce one to writing. I know that one is sadly handicapped who undertakes to treat diseases of the eye and its appendages without a definite working knowledge of the nose, throat and teeth and the diseases to which they are susceptible, unless he is so fortunately situated as to be able to command the services of one so qualified. The same is true of the oculist, rhinologist, and laryngologist in relation to general medicine. We have patients coming to us complaining of one symptom alone—loss of vision—while an examination shows the symptom complained of is the local expression of a grave systemic disease. So do we have patients coming to us for the treatment of an eye condition due solely to, or aggravated by conditions to be found in the nose, throat and teeth. Generally they do not complain of these organs any more than one suffering from a grave constitutional condition complains of the organs most seriously involved. The burden of his soul is an inability to use his eyes with comfort or at all to meet the exigencies of our complex life. The specialist should not only have a comprehensive working knowledge of medicine, but also a relative knowledge of medicine in its every department in its relation to the organ which he has undertaken to treat.

To illustrate—in about 1902 I was consulted by a young man about 25 years old, who gave a history of long standing eye trouble, which had incapacitated him for work. He said he had been treated by a very competent man for more than two years without permanent relief. Incidentally he stated that he had had trouble with his bowels from childhood, that he never had a movement of his bowels without a large dose of magnesia sulphate. The anatomical diagnosis was easy—irido-cyclitis—and as he have a history of rather a dissolute life, I thought his trouble specific. He gave no specific history and the diagnosis was made from the known predilection to specific diseases of the iris and ciliary body—

and as the Wassermann had not yet arrived, I used the then only known test, the therapeutic. His improvement was very satisfactory. I congratulated myself upon my superior diagnostic acumen, and wondered how my predecessor could have overlooked such a prolific source—when after two months' treatment, when the eyes were just getting into a most satisfactory condition, a day's feasting brought to tumbled nothingness my dream of superior wisdom. On the third day after this debauch he returned with his eyes in a worse condition than at any time since I had seen him. As I said before, the history of obstipation had challenged my attention but had not arrested it—I knew I was dealing with the local expression of a systemic disease. I knew it could not be syphilis so referred him to Dr. J. R. Pennington, who found a pathological condition of Houston's valves, the correction of which within two weeks cured a condition which two of us had failed to benefit in more than that many years.

It is not my purpose to dwell in this inviting field as I have limited my subject to continuous, contiguous, and related structures. I have not done so from any lack of appreciation of those other greater subjects, a knowledge of which is so necessary for every one working in every department of medicine. The anatomical relations between the nose, throat, teeth, and eye are intimate and direct. The continuous mucosa, the associated vascular, lymphatic, and nerve supply, and while we seldom see nose and throat pathology which had its origin in the eye the converse of this is often true. We seldom see a disease of the eye or its appendages, such as conjunctivitis in all its varied manifestations, especially of the chronic or recurrent type, such as blepharitis marginalis, trachoma, etc., but what we find those conditions aggravated by pathological condition in nose, throat, or teeth.

It is not my purpose to give case histories except as incident to the citations of cases of pathological change involving the eye or its appendages, clearly due to or made worse by diseased conditions within the nose or throat, nor is it my purpose to enlarge upon the already too voluminous histories of those of a suppurative type. Two very interesting and highly instructive articles will soon appear in the *JOURNAL A. M. A.* one by Dr. James Bordley of Baltimore, and the other by Dr. E. C. Ellett of Memphis, both deal-

*Read before the 70th Annual Meeting of the Illinois State Medical Society at Rockford, May 19, 1920.

ing with suppurative types. In cases here cited there was no pus, some seemingly without pathology in nose, throat, or teeth—all had anatomical defects, either congenital or acquired, a condition so frequently associated with acute, sub-acute, or chronic hyperplastic rhinitis.

Case 1. July 28, 1915. W. T. R., a railroad clerk, aged 20, never sick before, had been unable to see with left eye since the 24th. Father died at the age of 49 of a kidney disease the nature of which he did not know; mother living, aged 60; right 20/20, left P., neuro-retino choroiditis, cloudy swelling temporal central, a large sub-retinal exudate in the superior temporal quadrant 12 x 18 mm elevated 4 diopters, disc swollen and general edema of the retina, diseased tonsils, septum deflected to the left in contact with lateral wall, hypertrophy right middle turbinal, slight tuberculin reaction. August 2, consultation with Drs. Faith and Fisher: Fisher believing it to be a sarcoma advised enucleation; Faith and I dissented because of condition found which we had never seen associated with sarcoma, and evidently due to an acute toxemia of much virulence and of unknown etiology. The tonsils were removed, septum straightened, ethmoids and sphenoids opened. Mixed treatment was at first administered but upon laboratory report was discontinued; tuberculin used throughout the treatment. Visual improvement followed operative work and change rapidly took place in fundus. A month later his vision was 20/50 and gradually improved until at time of discharge, December, 1916, it was 20/30 in left eye, the right never became involved. After the first month he visited me once in five days until his discharge. The large sub-retinal exudate which looked like a sarcoma left a spot of choroidal atrophy which looks like a hole. A small spot of the same character was left a little above and to the temporal side of macula. I wrote this man to report since starting this paper. My letter was not returned, and I am in doubt as to whether to attribute his failure to reply to ingratitude or to the incidence of war.

The condition which called forth this paper was somewhat different in character. The only too common, but highly refractive one of blepharitis marginalis, two associated with entropion which had existed since childhood.

Case 2. July 10, 1920, Mrs. H., a young woman with blepharitis marginalis since childhood, and styes since last year; styes had stopped for six months and started again lately. She had a pair of glasses from Dr. Zeigler of Philadelphia, which were correct R + 0.50 ax 90, L. + 0.50 ax 90, prescribed on account of this condition, which she, for a woman's reason, refused to wear. I treated her for some weeks with expression, massage and argenti nitrate 10 per cent applied to eye-lid margins with great benefit. She improved and relapsed; this was repeated several times in five years. Then I removed her tonsils. The lids cleared up, and in the five years since, I have treated

her eyes once. All redness of margins has long since faded. She has not worn her glasses.

Case 3. May 2, 1914, Miss M., eyes had been sore for twenty years. R. 20/40 + 1.25 + 100 ax 90 = 20/30; L. 20/60 + 2.25 ax 90 = 20/30. Nebula on each cornea interfering with vision. Blepharitis marginalis worse for the past month, entropion, diseased tonsils, septum deflected to the right in contact with lateral wall, chronic ethmoiditis and sphenoiditis. Treated lids and advised operative work on throat, nose, and eyelids. Under expression, massage and application of argenti nitrate 10 per cent to eyelid margins she improved greatly and discharged herself May 30. Her next visit was November 28, 1919; all conditions worse, and must have relief. I removed her tonsils, straightened the septum and cleaned out sinuses—also did a Hotz. The eyelid condition is now well. She has gained flesh and is satisfied with result.

Case 4. Feb. 21, 1916, Miss G., aged 28, has had trouble with eyelids since she was six months old; eyes tire easily, lids get sore and cannot see well at night; vision with R. and L. + 0.75 + 0.25 ax 90 each 20/20. Blepharitis marginalis, entropion, diseased tonsils, septum deflected to the left, chronic sinusitis. June 4 did a Hotz operation on each lid—results so far as entropion quite satisfactory, but lids remained thickened and red. I had advised the removal of tonsils and straightening of septum, but as tonsils did not give her a great deal of trouble she asked the nose operation first, which was done in the fall of 1916. She was treated at irregular intervals from then until May, 1919, when she had an acute attack of tonsillitis. Work done upon eyelids and nose, the wearing of glasses, massage and silver had not made any improvement in the thickened and inflamed eyelids, but now she wanted her tonsils out. Work done June 18, 1919, and in two weeks the improvement was marked, in fact, almost normal in appearance, and now entirely so. Here was a case more than three years after operative work on nose and eyelids, combined with what we usually do in these cases had not relieved the trouble at all—yet immediately upon the removal of tonsils began to improve and continued to until well.

Another condition which we frequently see and many times fail to relieve is that only too common condition of specks floating before the eyes—the muscal volitantes. I do not include those of embryonic origin, but only those entropic images which are produced by opacities of the lens or its capsule. It is not my purpose to take up the etiology of cataracts any farther than its relation to nose and throat, and that not in detail, for time does not permit. We know that it is not a physiological process. We know that underlying every cataract there is pathology; something interferes with nutrition, a disturbance more or less local in character. We know

that every simple cold means sinusitis, it may be transient or persistent, but repeated insults to the vascular, lymph, and nerve supply through the nose, throat, and teeth by the absorption of bacteria or their end products, toxines arising from bacterial activity in this region, must produce its impress upon adjacent structure. I know I have caused them to disappear by the cleaning up of nose and throat pathology. I do not limit my work to these procedures alone, but use every agency which experience has proven useful. In the literature of the past twelve years there has appeared with increasing frequency articles upon eye pathology of dental origin and it has been found that there is no structure whether intra or extra ocular exempt from disease which had its origin in the teeth. These observations are too widely distributed, too frequently reported by competent observers to admit of question, and every eye condition of unknown pathology should have this question solved by dentist and laboratory. The discovery by Bass and Johns that the ocular symptoms set up by the endameba buccalis could be cured by the use of ipecacuanha and one of its active principles emetine, has been confirmed by most observers.

PERITONEOSCOPE, PNEUMOPERITONEUM AND X-RAYS IN ABDOMINAL DIAGNOSIS*

B. H. ORNDOFF, A. M., M. D., F. A. C. P.
CHICAGO

In this paper I will endeavor to present a somewhat brief summary of experience in peritoneoscopy and x-ray examinations of the abdomen after pneumoperitoneum has been produced.

PERITONEOSCOPE

The peritoneoscope devised by Jacobaues and designated by him the laparoscope, consists of a trocar and cannula, an automatic valve attachment, a lamp and lens system and the necessary electrical connection for illumination. In my use of this instrument, it has always been inserted through the abdominal wall after pneumoperitoneum has been produced. With the anterior abdominal wall separated from the visceral line, when the patient is in a horizontal position and with the x-ray and fluorescent screen to assist,

there is very little danger of damage to the abdominal viscera.

The technique for introducing the peritoneoscope is simple and requires no special skill. A small incision is made through the skin after the site has been properly prepared. The scalpel used in this work has cutting edge on both surfaces and the width of the blade when inserted makes an incision of the proper size to permit the introduction of the trocar and cannula. As the trocar is directed down through the abdominal wall, the peritoneum will be seen to recede from the abdominal wall before permitting the trocar to penetrate it. The x-ray observations aid one greatly in maintaining a safe distance between the sharp trocar and the underlying abdominal viscera. A more detailed description of the technique I have used appears in the *Journal of Radiology*.

On account of the great variation in the diameter of the abdominal wall, it has been necessary to have different lengths of cannulas and trocars provided. A special aspirator, designed to work with the instrument, has been found very useful in connection with peritoneoscopy in cases where there is an existing ascites.

After the peritoneoscope has been inserted, the findings to be elicited are limited by a fairly narrow field of observation, i. e., viscera under observation at a distance of two centimeters appear normal in size at which time the area of observation is a circle of two centimeters in diameter. Observations may also be limited by the fact that the omentum may cover the organ it is desirable to examine. Peritoneal adhesions at times fix organs in such positions that it is impossible to surround them with the gaseous media and, therefore, illumination of their surfaces is impossible.

This instrument has been used in more than seventy examinations and there has been no case in which an undesirable reaction or complication has followed its use.

Some of the clinical conditions in which data of diagnostic importance has been obtained are tubercular peritonitis, malignant metastasis in the peritoneum, liver, stomach, etc.; chronic pyosalpinx, ovarian cysts, dermoid cysts, pregnancy, extra and intra-uterine, hemoperitoneum, low grade peritonitis, and it may be mentioned that findings of interest may be determined by transillumination of the abdominal wall, bladder, stomach, duodenum, etc. Certain conditions of

*Read before the Chicago Medical Society, October 27, 192

the liver, spleen and other abdominal viscera, in which color variations of the surfaces present diagnostic data, may be elicited with the peritoneoscope.

PNEUMOPERITONEUM

Pneumoperitoneum indicates the presence of a gaseous medium in the peritoneal cavity. The first report of work done in America where pneumoperitoneum was produced and used in conjunction with x-rays for diagnostic purposes was by Stewart and Stein. The technique for producing pneumoperitoneum, which I have previously reported, has been modified somewhat with a view of reducing the distress which was occasionally experienced by the patients. Alvarez recommends the use of carbon dioxide which is absorbed entirely in about forty-five minutes. Oxygen may be withdrawn when it seems desirable, but if it is left for absorption the distension will usually have disappeared in six to twelve hours, while a small amount may be noted to remain in the peritoneal cavity for several days.

Pneumoperitoneum may be produced for both diagnostic and therapeutic purposes. Its principal use in diagnosis is in connection with peritoneoscopy and x-ray studies of the abdominal viscera.

Bainbridge pointed out as long ago as 1908 the therapeutic possibilities of oxygen pneumoperitoneum. At this time, he gave a very careful review of the literature on this subject and summarized the results of his experience in a series of several hundred cases, the first work of which was done as early as 1903. Our experience has largely been concerned with the use of oxygen in tuberculous peritonitis and with the release and prevention of post-operative adhesions.

The diagnosis of patency of the oviducts where sterility of the female is in question may be determined by passing oxygen into the cavity of the uterus and noting the presence of the oxygen in the peritoneal cavity as pointed out recently by I. C. Rubin. Our technique has been to use an aluminum pessary fitted with a Luer syringe connection and of the proper size to establish an air tight contact with the cervix in order that a fifty millimeter of mercury pressure may be maintained within the uterus for sufficient time to allow the oxygen to escape through the oviduct into the peritoneal cavity in sufficient quantity to permit its detection.

X-RAYS

The x-rays and the fluorescent screen seem to be a necessary adjunct to pneumoperitoneum and peritoneoscopy in abdominal diagnosis. It is our rule to place the patient in such a position that the organ to be examined may be plainly visualized in the fluorescent screen, which indicates that it has been separated from other organs and its margins differentiated in contrast to the surrounding gaseous medium. The peritoneoscope is also plainly visualized after it has been inserted into the abdomen and these observations permit one to direct the peritoneoscope to the surface of the organ to be examined. Movement of the organ under observation often assists one greatly in its identification, as for example, the movement of the uterus or ovary through the vagina. The plane on which the beam of x-rays travels while passing through the patient to the fluorescent screen is very important. It seems of equal advantage to be able to vary the plane of the x-rays as it is to vary the position of the patient. To facilitate this important point in technique, I have devised a table, which makes possible a much greater variation of the source of the x-rays and thereby has facilitated greatly our work with peritoneoscopy and pneumoperitoneum.

Some of the important findings elicited by the x-rays and fluorescent screen after pneumoperitoneum has been produced are the size, position, contour, density and mobility of the liver, spleen, uterus, ovary, kidneys and other abdominal viscera and the degree of accuracy is not readily obtained by other methods of diagnosis. The diaphragm and subdiaphragmatic space may be investigated while it is difficult to secure reliable diagnostic data by other methods.

In conclusion I wish to express my gratitude to the members of the staff of the Frances Willard Hospital for their friendly co-operation.

25 E. Washington St.

By shutting off the air you can smother the fire in your stove or furnace. You can also smother the fires of life by excluding fresh, outside air from your home and more especially your sleeping rooms.

Learning how to eat is a long step towards learning: how to live.

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JANUARY, 1921

Editorial

A HAPPY NEW YEAR

"The Moving Finger Writes; and having Writ Moves on; nor all your Piety nor Wit

Shall Lure it Back to Cancel Half a Line,
Nor all your Tears Wash out a Word of it!"

Another new year has arrived. With its ad-

vent, the twentieth century attains the voting majority of twenty-one years.

Responsibilities placed upon the human race during the past two decades are heavier than at any time since the commencement of the Christian era. Civilization is still on trial for its life and that before a prejudiced tribunal. The world war that tore apart the man-made system of internationalism bereft the human mind of its stabilizer. As a result, curious side slips and nose dips mark the quest for another.

Upon the shoulders of the medical profession there rests with renewed weight the obligation to aid humanity in keeping "a sane mind in a sane body." Strenuous times await. History and nature are allied closely and war's aftermath demands its natural course.

Health is the greatest army, the surest ammunition with which to wage the fight of right. Through the relative skill of the physicians of a nation its public health rises or falls. Neither the medical profession of a nation nor the nation itself is independent of each other. They are as correlative and interchangeable as the chicken and the egg. Medical efficiency will be lowered unless the public is educated to an appreciation of what such efficiency is and should be. A nation requires an excellent medical quota and its support. An excellent medical quota must have the support of the nation. Not only must this support be mental, but it must be financial. The Scriptural admonition as to "Faith without works" is a timely text for the doctor.

In the lean years of the war, in the subsequent fulsome years of the worst extravagance the nation has ever known, the physicians of the land struggled along on an average smaller per capita income than was collected by the semi-skilled mechanic or laborer. This, too, in the face of terrifically increased living expenses and costs of implements and supplies required for daily practice.

The injustice and the impossibility of a continuance of such conditions is patent to the veriest tyro in economics. And without doubt there can be no higher nor more necessary task awaiting the physicians in this new year than to make it plain to the public that the medical profession must have a genuine living wage. Unless this is secured all individuality in the individual practitioner of medicine will be crip-

pled and in time lost completely. Today the American people possess the best medical facilities that science can bestow. They deserve to retain this wonderful endowment. Open the eyes of the public to actual conditions and the response will be ready. As a nation we like comfort and a sick man is about the most uncomfortable human imaginable both to himself and to all about him.

The organic sense of individuality in the individual practitioner is at once a manifestation of unity and of separateness. To lose it would be to lose the national soul of co-operation with other nations for a common good and a feeling of world-wide sympathy and fellowship. These are ideals we dare not cast aside. They are of the highest virtue to a nation and of absolute necessity.

In the year 1921 the Illinois State Medical Society finds itself dedicated to greater service than it has ever known.

"Service"! The word is unique now when the world seethes about us in a maelstrom of discontent with the word "service" and its meaning almost as obsolete as the fashionable bustle of the mid-Victorian period. To do anything except to serve appears to be the maxim of the nations. There is some excuse for it, no doubt, but the medical profession must continue to keep its head and to recognize its double duty—to the people and to itself—much as a wise father treats the excesses of a wayward son. It will not do at all for the doctors to get into the habit of Mark Twain's cat, where the ideals of service are involved. But it behooves the physician everywhere to remember the remark that prefaced the tale of the cat.

"Do you get more out of experience than there is in it?" Twain asked. "Now, for example, a cat will sit on a hot stove once. But having sat on a hot stove once it will not sit on a hot stove again. And the trouble is that cat won't ever again even sit on a cold stove." The mentality of the world today is quite parallel with that of the cat. And to repeat, it is the task of the physician to straighten out that perspective and to instill again the "sane mind in the sane body."

Meanwhile bolshevism and conservatism keep flying at each other's throats. Bolshevism is attacking the very vitals of the rights of the

medical profession without cognizance of the fact that this is one of the first steps towards national suicide. In order to maintain its individuality the medical profession must commence to co-operate more than ever before. "In union there is strength" and the most strategic fashion in which to fight the natural reaction from the war and from its aftermath lies in the solidarity of organization among the physicians of the country.

Experts in political economy insist that good and bad times must run in cycles. Forms of government change; administrative officers come and go, but the seasons, the passions and emotions and the higher powers that defy human agencies have their way. No man can gainsay this. If the dead years could speak they would hold out to us the handclasp of sympathy and reassurance.

Speaking colloquially, we are in for a bad storm, unless all signs fail—as it is said they do, in dry weather. But being forewarned wise folk will either come in out of the wet or invest in goloshes, slickers, umbrellas and other protective paraphernalia. We are not done yet with bolshevism. Its crimes are many, its sins black and unatoned for. Let every physician see to it that in so far as he personally is concerned the years to come shall not record that by lack of organization, of propaganda and of individual effort on his part the years of reaction submerge in the tide of radicalism the decades of self-sacrificing labor offered up by the pioneer physicians of the United States.

We have no autocracy of birth in this country. We will refuse to have one of class or of race. The pilgrim fathers opened here a fountain of equal opportunities for all. We have drunk its waters and waxed rich and powerful, and must forbend that the fountain is never sealed against our sons. The institutions under which we live are of such transcendent worth that their protection is the imperious and permanent duty of all whose rights are made safe through the marvelous counterpoise of liberty and law afforded by these institutions. They are ours, and ours alone.

Representing the clear foresight and high wisdom of their creators they have come down to us as the final expression of Anglo-Saxon effort, which, through the centuries has moved—some-

times painfully, often slowly, but always steadily toward the culminating glory of their achievement. They who belittle these institutions, who would replace their concrete and intimate processes with some abstract and foreign conception of world wide fraternity are plotters of evil or vain dreamers of dreams.

A happy New Year! It will be found in service—in duty well done.

The twelvemonths to come are a fertile bonus from time and experience. Use them well.

THE MEDICAL, LEGISLATIVE AND ECONOMIC OUTLOOK FOR 1921

For the doctors of the United States we foresee a strenuous year. The legislatures of most of the states convene early in 1921 and we are confident the usual number of vicious medical bills will be introduced and urged for passage.

Unfortunately the medical profession is confronted with numerous enemies without and a liberal sprinkling of traitors within its own ranks. Thousands of endocrine perverts, derailed menopausics and a lot of other men and women who have been bitten by that fatal parasite, the *upliftus putrifaciens* in the guise of uplifters, are seeking to eliminate the doctor by crushing his individuality, hampering initiative and hoping thereby to accomplish the destruction of scientific medical progress, by attempting to divert the practice of medicine into untrained and incompetent hands, which will bring about, as it has done in other countries, the worst imaginable form of medical service.

The wolf at the doctor's door is about to leap across the threshold and catch by the throat the entire profession. Hidden under the cloak of State Medicine, compulsory health insurance, national socialization of medicine and sundry other acknowledged offspring of radicalism and cheap politics, only a small percentage of physicians have guessed the evil for what it is. The majority of the profession have been as gullible and unsuspecting as a thousand gross lot of red riding hoods, made in Germany before the war.

Those doctors who are out of the Red Riding Hood class, the men who are awake to the dangers threatening the profession, realize that unless radical action is accomplished speedily, before very long, too, the doctor will find him-

self deprived of the privilege of continuing his present occupation.

In recent years the economic status of medicine has been practically turned inside out. Figuratively speaking the physician has become a civic non-entity. Politicians have arrived at the State where with their business eye they regard a physician as "being in the world but not of it," and neither politics nor "big business" has hesitated to take advantage of this condition. Considered an "easy mark" to begin with, these interests proceed to make us "the goat" and endeavor to classify us as the cheapest of cheap labor. For years past the medical profession has furnished the most servile of hired men for corporations and the great insurance companies. Now the profession is in a fair way to enter serfdom as a vassal of the State.

This is not an arbitrary statement. It is more than possible or plausible or even probable. The condition is actually on its way, and almost ready to be delivered F. O. B. To dissolve your doubts, review recent occurrences in politics and in commerce and their relative effect upon the doctor and his tasks. Reflect upon the compensation received from insurance companies for services rendered. Study the wages of contract doctors, industrial physicians and other bondsmen of that ilk. Inquire about salaries paid office holding physicians through municipal and State political machinery. In each of these instances the physician as an individual or as an organization is without voice as to the valuation of medical services. He has simply nothing to say. What a contrast to the relations between organized labor and politics; if our sight and hearing are to be believed in this latter instance the rule is for the unions to suggest and for the politicians to comply. Here is where politics grows husky and swallows its own medicine.

Grim as comment must be upon this enslaving of the profession these examples are but the handwriting on the wall. They record merely the beginning of the servitude of the doctor and his art. Current conditions reflect certainly upon the commercial sagacity of the medical profession and may be said to indicate the lack of ability on the part of the profession to take care of itself. Yet in the face of the dangers that menace us in the future, present abuses are insignificant.

Current conditions corrode the profession in

its individual units. The impending peril will eat into the profession as a whole. What is going to be the master annihilator of the profession is the proposed socialization of the physician's calling.

As we remarked in the beginning, this menace has many names. Call it what you will, you do not lessen its perniciousness nor kill its venom. Be not deceived; socializing medical legislation for 1921 is not an intangible fancy; they are being drafted into bills to be submitted to a score of legislators at this very writing. Some of them have been presented to previous legislatures. California, New York and Ohio have barely escaped the bane of compulsory health insurance. Most assuredly these States will have to contend with it and others when their legislatures convene this year.

In Illinois several of these socialistic schemes will be introduced into the General Assembly if the powerful interests are not defeated that are now working overtime to prepare a proper debut for their schemes. Why? Well, of course politicians must have new issues. A questionable value as a vote getter is offered through these socializing bolsheviki ideas.

Compulsory health insurance has a bad past to live down. Experience shows that the physicians were not called into consultation as to their wishes in the matter either in England or in Germany. The politicians did it without medical aid. The fate of the profession was settled beforehand. Although the profession was the organization that would be affected most vitally by the law, yet it was not allowed a word of assent, dissent or protest.

Although riding under the banner of socialism the very creed of the cult was disdained before ever the wires were lowered. It is a good example of an altruism that works only one way. Under the socializing scheme planned the doctor is asked merely to pay the increased taxes and to render the services required at pauper prices. Physicians in the United States have a last chance to profit by the experiences of the confraternity in Germany and in England. If we allow these schemes to be enacted into law we will find that the only alternative will be to accept whatever conditions of slavery the politicians and the radicals prefer to impose upon us.

There are numerous organizations preparing

industriously for presentation to the 1921 legislatures bills affecting the medical profession that we must be prepared to meet and to fight. Included in this list are the American Association for labor Legislation, the Rand School (Anarchist), the Woman's Trade Union League. Their devised legislation is prolific. Enumerated are

(A) Compulsory Health Insurance (Medicine subordinated to politics).

(B) State Medicine (Medicine degraded).

(C) National Socialization of Medicine (Medicine demoralized).

(D) Coercive Medical Reregistration (Judicial power of revocation without judicial responsibility).

(E) Drugless Therapy—Chiropractics—57 varieties of charlatans.

(F) Administrative (tin badge) not judicial (warrant) right of search (alcohol and narcotics).

(G) Narcotic Control—to foster private institutions and penalize ambulatory treatment.

The present day trend of governmental and legislative attempt to standardize medicine and to regulate the practice of medicine by legislative fiat will prove disastrous to the people if not curtailed. New discoveries, a better understanding of existing methods, idiosyncrasies, susceptibilities, the variations and reactions of people and of the same persons under different circumstances, will go on in response to the universal law of change which forbids the world to stand still. Any legislation therefore the purpose of which is to standardize medical practice, is doomed to failure from the beginning because it involves the fatal mistake of attempting by legislation or rule to render immovable that which by its very nature must be eternally and resistlessly upon the march.

In spite of the above facts there are still some people in this country who would like to turn over the supervision of the medical treatment of the 105,000,000 of our population to the socialistic schemes of the dream book theorists who draw inspiration from some of the discredited and bankrupt countries of Europe. We admit that things are far from perfect and we are working overtime to help devise methods in order to simplify our government processes and we are handicapped at every turn by certain alleged high-brows, better styled medical bolshevists, who try

to improve conditions by multiplying the agencies which are the cause of the present day unsatisfactory conditions.

The solution of these and many other socialistic problems has become doubly imperative as a result of the war. With an alert electorate and an active medical profession we shall satisfactorily solve them, of course, but they will be followed in never ending succession by other questions no less serious and important. The great lesson we must continually learn and relearn is that eternal vigilance is not only the price of liberty, but the price of peace and order and general well being, and all the other blessings which follow an adherence to the principles of good government. It is, therefore, the duty of every physician, as well as of every citizen who appreciates their measureless value, to be perpetually alert not only to meet and resist every direct and deliberate attempt to destroy them, but to defend them against the insidiously hostile schemes of the purveyors of theory who are trying to destroy our country by attempting to place on the statute books of the respective states destructive schemes imported from Europe.

GENERAL UNSTABILIZED ECONOMIC CONDITIONS SERIOUSLY AFFECT THE MEDICAL PROFESSION.

The war thrust upon us an unnatural and unbalanced prosperity and left us a legacy of inflation, speculation and excessive improvidence. A large volume of easy money found its way into the National treasury, and likewise into the pockets of many people to whom a substantial cash surplus was a new and tempting possession. As a result there followed among those of improvident and self-indulgent tendencies, a passion for expenditure in the pursuit of pleasure and costly nonessentials which, undoubtedly, has no parallel in history.

The year just closed has been one of trouble and unrest at home and abroad, and we express the belief that it will be a long time before we find ourselves sailing again in quiet seas.

In the coming year the country will be faced by serious growing unemployment, the result of economic factors from which there is no swift or easy escape.

The medical profession should not regard

either the present position or the future outlook without anxiety, for what affects the general public must with the same degree of seriousness also affect the medical profession. For this reason the situation should not be waived aside as inconsequential.

The problem of the time is reconstruction. We are all familiar with the problem of material reconstruction. Recently we have watched the immense wiping out of accumulated wealth, the appalling destruction of human life, the invasion and overturning of fertile land, of orderly communities and of great monuments of public spirit, of religion and of art. We have witnessed the complete upsetting of our economic system, and the dislocation not only of our financial resources, but also of financial methods, so that every observer knows in general what the problem of material reconstruction involves. It involves clearing the ground, rebuilding those things which have been destroyed and which can be measured and weighed and counted.

In the turmoil of devising plans for social reconstruction we find one encouraging factor, it is this: That all the people are at last convinced that the world is at present sadly out of joint. The physician who cannot make a proper diagnosis is the undertaker's best friend and the sick man who refuses all remedies is marked for an early death, and the men who cry peace! and who are attempting to remedy the ills of the world and the medical profession's economic troubles by attempting to legislate into our social fabric alleged panaceas which in reality are worse than the evils they seek to remedy are no better than the miscreants who would recreate society by the liberal use of dynamite. Both make genuine reconstruction impossible, because both paralyze intelligent action.

Several factors are operating to keep the world divided into discordant elements. The principal disturbing element is a general belief that there is in this country an unequal distribution of wealth. Labor and capital are at each other's throats; women and children starve because of injustice in high places; people are not living as human beings should live, some merely exist; capital points to the imperious demand of an eight hour day, while the physician, the nurse, the clergyman and the teacher, set no limits to their period of toil, but are ready at all times to

minister for a pittance, or for no recompense at all, to the needs of the public.

While conditions are topsy turvy it is possible to bring them back to health. So far no plan for social reconstruction suggests the complete treatment; however, a beginning could be made by rapid reestablishment of social justice. Three curses are operating to the detriment of government stability in this country at the present time, they are: Autocracy, bureaucracy and bolshevism. Not centralization of more power at Washington is wanted, but decentralization of that now existing there would go a long way to help remedy existing social ills. The present trend towards centralization of power in this country is raising an army of politicians and bureaucrats, all of whom must be supported by general taxation of the people.

Unless the drift towards bureaucratic government is stopped Americans will be the most ruled and standardized people in the world, and we will need armies of citizens to enforce all the laws; by and by we shall all be state and government employes, earning our pay by watching or spying on one another.

Our nation today faces great perils. Insidious and destructive forces are at work. As a result of the war there has been let loose forces of doubt, forces of cynicism, forces of despair and of destruction, that not only have no pride in what is going on in this country, but that would be only too happy to bring it to a sudden and destructive end. Men and women everywhere are surprised that the old principles of government and of economics and of social life that have controlled so long, that have been so beneficial in their application, that have produced such extraordinary results—they are surprised that those should be challenged; that the very principles upon which American government rests are not only doubted but attacked—that the very ideals of our social and political and economic order, which we have thought secure because so sound, so generous and so high minded—those very principles are treated with cynical contempt and their application is made the ground for the preaching of a gospel of dissatisfaction and anarchy and destruction.

And, because of this, the problems of the country today challenge our serious and thoughtful attention. The medical profession have a

very deep and a very vital interest in their proper solution. No previous age of the world has been called upon to deal with questions more vital to the welfare of humanity or the preservation of human civilization. The duty rests upon all to resist these forces of evil with all the resources at our command. The medical profession can and will do a great part towards stabilizing the unsettled economic condition of the country and the hysterical condition of its people.

STATE MEDICINE DESTROYS INDIVIDUAL INITIATIVE AND WILL NULLIFY MEDICAL PROGRESS THE SAME AS COMPULSORY HEALTH INSURANCE HAS DONE IN GERMANY.

Our worthy contemporary *American Medicine* (October, 1920), formerly a warm advocate of compulsory health insurance, has seen fit to criticize our article the "Evolution In Medical Practice or What Ails The Profession" in which we enumerate a number of the socializing factors operating in present day medical practice. The concluding paragraph of the criticism reads as follows:

The socialization of medicine does not eliminate the physician. Nor does it impair his usefulness; nor does it decrease his opportunities or his financial rewards. As a matter of fact, it dignifies medicine, strengthens it, stimulates its resourcefulness, and advances its progress in numerous ways. It recognizes the doctor as a prominent agency in promoting human welfare. It is time that the few reactionaries rebelling against human advancement and the progress of public health, took stock of the meaning underlying the social tendencies of today, and re-valued them in the light of community welfare rather than in terms of a personal pecuniary return. The rights and interests of medical men as men are bound up in the rights and interests of mankind.

To disprove the contention of *American Medicine* we can point to the fact that under the socializing influences operating in Germany and England, in both these countries, the people are receiving the worst medical and surgical care of any communities in the world.

Dr. Edward H. Ochsner, of Chicago, Illinois, the greatest authority in the world on medical economics, has proven our contention quite conclusively. As showing the demoralizing effect

State Medicine, Compulsory Health Insurance and other socializing schemes have had in stifling initiative and in hampering medical progress we quote him as follows:

In his argument presented before the Illinois State Health Insurance Commission, at Chicago, Illinois, on November 8, 1918, and published in the ILLINOIS MEDICAL JOURNAL, January, 1919, he said:

Next to stability of government, honesty of administration, and general intelligence of the people, the welfare of a nation depends more upon the quality of medical service which is rendered to the people, than upon any one other thing.

The longevity, health, efficiency and happiness of a people depend more upon the integrity, ability and industry of its medical profession than upon anything else.

If it can be demonstrated that compulsory health insurance has lowered the standard of medical service where it has been in force the longest, and is likely to have that effect if introduced in this country, then surely it would be unwise to introduce it here.

If we can prove that in European countries medical progress has been seriously checked by compulsory health insurance; if we can prove that the quality of medical service rendered under compulsory health insurance is poorer in those countries, then compulsory health insurance has not even one leg to stand on, gentlemen, and I believe we can prove just that.

From the year 1860 to the beginning of this century, Germany and Austria were in the forefront of medical progress. Everyone, even the layman, is familiar with such names as Billroth, Volkmann, Hebra, Koenig. Billroth was the great German surgeon who finally went to Austria, and who did the great primary work in stomach surgery; Volkmann was the great bone surgeon; Hebra was the great skin specialist, and Koenig was another great bone surgeon. In the early seventies and eighties, fractures and such things were about the only things surgeons attended to. Modern surgical technique had not made the other work possible. I could mention to you, gentlemen, thirty or forty other German and Austrian medical men who ranked almost as high as those mentioned. Behring and Roux, the Frenchmen, simultaneously, in 1894, discovered the diphtheria serum. Roentgen, a German, discovered the Roentgen Rays, the X-Ray, as we speak of it, in 1895. Lorenz, the Austrian surgeon, introduced the bloodless cure for congenital dislocation of the hip, in 1896. Isn't it a strange thing, Ladies and Gentlemen, that since 1896 not one single thing of prime medical importance has come out of Germany and Austria? One. I beg your pardon. Salvarsan, and that was a laboratory discovery. It was discovered by a man who knew absolutely nothing about the practice

of medicine; a graduate in medicine, yes, but he never practiced a day, and yet he discovered the only thing of importance that has come out of Germany in the last twenty years. Why? Because compulsory health insurance has crushed the independence and enthusiasm out of the German profession to such a degree that men of real ability are studying medicine in smaller and smaller numbers in Germany today, and the men of the first magnitude in Germany and Austria today under forty years of age can be counted on the fingers of one hand, among one hundred and thirty million people. There is a reason for that, gentlemen.

In the meantime, what has happened in America, and in the countries which have not been cursed by compulsory health insurance until recent years? Let me tell you a few of the things that have been accomplished in the last twenty-five years outside of Germany and Austria. Germany and Austria, who were the leaders in the science of medicine twenty-five years ago, have taken a place way down. There is a reason. If anybody else can give us another reason than the one I have mentioned, I would like to hear it.

In America and other countries progress has been steady; appendicitis and its treatment was developed principally in Chicago, Philadelphia and New York; gall bladder surgery in Rochester, Minnesota and Chicago; goiter surgery in Berne, Switzerland, Chicago and Rochester; stomach surgery in Rochester and Leeds, England; malaria and yellow fever by our own Walter Reed of the Marine Hospital; joint surgery in Boston, New York and Chicago. Why do not Germany and Austria come in for a little of that? Now, those are medical facts, and they cannot be successfully disputed because they are facts. When Billroth died, along in 1892 or 1893, all progress in stomach surgery stopped until Drs. William J. and Charles H. Mayo revived it and brought it up to its present degree of perfection. Why did not the followers of Billroth do that work? They had the advantage of being his assistants for years. Why?

As to the quality of medical services. Not only has medical progress been almost killed by compulsory health insurance legislation in Germany and Austria, but the quality of medical service which the people of those countries receive has deteriorated immeasurably in the last thirty years. Why? Why should it, gentlemen? Five or six years ago, the University of Wisconsin went into a combination of welfare and contract practice. They charged their students so much per semester and they appointed a medical staff to look after their health and to treat them. In the winter of 1916, I was asked to appear before the Committee on Education of the Legislature of Wisconsin, and in the presence of that Committee and within my hearing the Dean of the Medical School of the University of Wisconsin made the statement that during the fall semester of 1915-1916, a period

of four months, the clinical staff of that University made seventeen thousand examinations and calls on between four and five thousand students, healthy young men and women in the prime of life, or at the rate of about thirteen plus per year. They are figures that you cannot go back of, and they prove that when a man or a woman can have free medical advice they running to the doctor for every little ache and pain and they wear out his enthusiasm, and men of ability will not practice that kind of medicine very long. And when they once find out that that is the kind of practice of medicine they will have to go into, they will not study medicine, and that is just what happened in Germany and Austria. The quality of the average German and Austrian medical man has so deteriorated that, in answer to Mr. Ransom's question I will say, yes, the loss of time from sickness and the increased mortality rate in Germany over Switzerland is because the people of Germany get so much poorer medical service, and it is directly traceable to the compulsory health insurance laws of Germany.

Illustrative of the deleterious effects of State Medicine in hampering initiative and stifling medical progress, Dr. Ochsner before the Michigan State Medical Society, May 27, 1920 (*Michigan State Medical Journal*, July, 1920). (ILLINOIS MEDICAL JOURNAL, August, 1920) said:

During the four years from 1912 to 1916 I was President of the Illinois State Charities Commission. We had under our supervision, sixteen State Institutions with approximately twenty thousand inmates and four thousand employes and we had an excellent opportunity to study the advantages and disadvantages of government control of such institutions. I personally visited every institution one or more times, inspected practically every one of the hundreds of buildings, talked with hundreds of patients and dozens of employes and while during those four years the State Institutions of Illinois were exceptionally well managed and unusually free from spoils-politics, the best one could say for the medical and nursing service rendered was that it was mediocre. The reason for this is easy to find. From the very nature of things in institutions of this kind, there is an enormous amount of time wasted on paper work and red-tape. At best, advancement is largely by seniority and inefficient, incompetent seniors never resign and rarely ever die. By the time a real efficient man gets to the top his enthusiasm has usually been crushed out by non-essentials, or if this has not happened, he is hampered by inefficient subordinates of which he cannot rid the service. In this connection, let me call your attention to the following fact, namely, that while for many years approximately one per cent of our population has been under the medical supervision of our Federal, State, county and city

authorities, nothing of value in the treatment of diseases has been discovered by any of these departments since the organization of our government 144 years ago. Practically all of the marvelous advance in the treatment of diseases during that period of time is the result of individual effort by private physicians. When you consider the above and realize that this means that at the present time there are practically one million people under the medical supervision of the various departments of our government, is it not strange that not a single great discovery for the cure of disease has been made by any of the men in government service during all these years, and yet, for anyone familiar with all of the phases of medical practice both public and private, it is just exactly what one would naturally expect.

In spite of all of the above facts and many more that will be cited, there are still some people in this country who would like to turn over the supervision of the medical treatment of from sixty to eighty per cent, of our population and the expenditure of over one billion dollars per annum to one or the other of these governmental agencies. The mental processes of some of our ultra high-brows are beyond comprehension and are as inscrutable as is the enigmatic smile of Mona Lisa. These ultra high-brows realize, as every one must, that things are very imperfect. Then, instead of devising methods to simplify our government processes they try to improve the conditions by multiplying the very agencies which are the cause of the present day unsatisfactory conditions.

MASCULINISM OR FEMINISM?

Dr. Horace M. Brown of Milwaukee, Wisconsin, the greatest authority in the world on Endocrines and their relation to body function, before the Tri-State District Medical Association, October, 1920, at Waterloo, Iowa, said:

Errors of endocrine balance in males and females of the species have produced many feminine men and more masculine women. That instances of special ability in individuals of the masculine-female type have occurred, does not prove that woman can in any way function or take the place of man in the cosmos; nor does the converse of the sex conformation prove that man can take the place of woman. In both instances, the physical, physiological and psychical conditions are endocrinic abnormalities, and such types are in the mass failures in both sex characteristics.

However nearly the hen may approximate the production of a praiseworthy crowing, or however closely she may imitate the strutting of the cock, at certain times she must, whether she will or not, squat and lay an egg. This is a beautiful and most praiseworthy function and one in the performance of which the cock would make a ghastly fail-

ure, and it is one, in the performance of which the cock has no desire to rival the hen. Why should the hen wish to crow?

DRUG ADDICTION FROM THE LAY VIEW POINT.

The following excerpt from the October, 1920, issue of the *Policeman's News* is reproduced for the purpose of showing that at last the lay people are beginning to realize that addiction is a disease and that the unfortunate should be cared for as sick people not as criminals or degenerates:

Yet none of us can work intelligently or hope to achieve any marked success until we appreciate the fundamental mistakes of the old-fashioned superstitions regarding the opiate drug addicts. His case is not at all one for the penal institution, the psychologist or the reformer—it is worthy of the concentrated effort and sterling thought of the entire medical profession. He is a clinical subject, not a criminal; he should be treated by a specialist in addiction diseases and not by a desk sergeant.

I know full well that when the drug question is taken out of the hands of the police, no body of men will be more pleased and satisfied than the police themselves.

And yet the police and the public may well inquire for the reasons which, for all these years, have kept the question in its present stage. In justice to those of us who are striving for a reasonable understanding of a public matter, an explanation is due.

As usual with such things, it is simple. The experiences of early opium addicts, not including opium smokers, who are not considered in this study any more than tobacco smokers since it offers a different problem, was that the opiate was eaten. De Quincey and other fantastic writers in such works as "The Confessions of an Opium Eater" gave rise to the popular conception that the disease was an appetite since the addict ate the stuff. Being considered an unusual craving, it was then quite natural for the casual observer to class the thing as a matter of taste or, later, will power. One could stop if one wanted to—that was all there was to it.

By the same token that belief caused the disease to spread, since many tried it who felt that they could stop after a few experiences. Depending solely upon their own condition and also upon the amount of drug they ate, that intention was or was not realized, as the case may have been.

Not realizing the addiction properties of the substance, physicians gave opiates freely. Up to a few years ago no medical school even taught any true facts about drug addiction and so the majority of our addicts were made addicts by just such a method!

Still, considering it as a purely personal habit, the medical men made no effort to study the thing. Their only advice was to stop—when a patient wouldn't stop, they forcibly took it away from him. And as a result of this antipathy toward the subject, the sublime ignorance of the men who handled narcotics most, and the frequently jogged curiosity of the innocent public, narcotic drug addiction rapidly assumed formidable proportions. It is said, on splendid authority, that its first real spread in this country came through surgical and medical treatment during the Civil War. In the meantime, as soon as the legitimate physician began to think more sensibly about the thing, the law-makers wound red tape all around the works and it is no longer safe to carry out convictions.

You see, universal ignorance still prevails to such an extent that the police are incorrectly called upon to handle a problem fit only for the most elaborate clinic the Rockefeller Foundation could afford, plus the hearty cooperation of every upright doctor in America.

There is still another virulent offspring of these mistaken policies regarding drug regulation and control: the impetus given blackmailers by such an easy method of getting the names of unfortunates; the possible illegal printing and sale of duplicate registration cards at fabulous prices; the manipulation of those cards legally issued and many other criminal practices offer a large field for conscientious work on the part of the police when they are added to the already universal smuggling and domestic traffic of the stuff in tremendous quantities.

MEDICAL CALLS AT THIRTY-EIGHT CENTS

IT IS IMPOSSIBLE FOR A PANEL DOCTOR TO DO JUSTICE TO HIS WORK

As a sample of medical remuneration under the health insurance law in England we call attention to a letter in the *British Medical Journal* of November 15, by M. D., according to which a 7s (\$1.68) a year capitation fee works out at 1s. 3d (\$.30) for office consultation and 2s. 3d (\$.54) for home visits. The doctor therefor asks the pertinent question, "how much time can one afford to give for 1s. 3d (\$.30)? and drawing attention by way of contrast to the superiority of private practice, he replies that it is impossible for a panel doctor to do justice to his work. He therefor argues that if more adequate remuneration were paid which in part at least would be equivalent the doctor would give twice

the attention to the work and also would take pride in the service rendered. In the *British Medical Journal* of October 4, 1919, is a letter signed by Dr. H. A. Watson, Worcester, according to which in 1916 the actual remuneration for visits and attendance worked out at the rate of not quite 1s. 7d. (\$.38) a case.

TYPE OF MEDICAL SERVICE UNDER THE PANEL SYSTEM.

The medical man under the English Health Insurance law is not able to give patients proper attention. The following is taken from the *British Medical Journal*:

The patient was a builder's laborer and was suddenly taken sick with severe abdominal pains and sickness. He went to the panel doctor who was overwhelmed with work and found a long line of insured people who were waiting to get their papers signed. The doctor did not think there was anything serious the matter with the man and did not examine him, but gave a simple remedy. The next morning he was still very ill and again saw the doctor, who was again overwhelmed with patients and again did not examine him. He died a day or two after without any medical attendance. It is needless to say that the man would no doubt have lived if he had been operated on. The doctor stated at the inquest that he did not have the time, as he was busy six hours at a stretch signing cards and doing clerical work instead of attending to his practice. The jury excused the doctor because of the "scandalous amount of work that was imposed on him under the act" and gave a verdict of "death from natural causes" and added a rider that more care should be exercised in the future in the matter of examining insured persons by doctors under National Insurance Act.

RESULTS SPEAK LOUDER THAN WORDS.

The work of the contract practice committee of the Chicago Medical Society is attracting nationwide attention. This committee has been able through a campaign of dignified publicity to bring corporations, insurance companies and firms to a realization of the fact that medical men are entitled to compensation in keeping with the character and responsibilities of the services rendered.

The following case is typical of scores of others that have been settled in full since this committee began work three months ago.

Contract Practice Committee

The following is published for the information and guidance of our members:

Dear Sirs:

Permit me to add this final chapter to the controversy with the Yellow Cab Company regarding their non-payment of a bill for first aid services rendered July 17, 1919, as published in the Official Bulletin of November 20, 1920. A representative of the Prairie State Insurance Association came to my office today expressing regret and offering apologies concerning the incident. He stated that their record does not show any bill having been received. Let us be magnanimous and not question the correctness of that explanation. The Yellow Cab Company has apologized, the bill has been paid today in full, the reputation of your Committee as being able to persuade some people to see and accept the point of view of some other folks has once more increased considerably, and everybody is happy. Please publish this in the Bulletin, so that proper credit shall be given your Committee by the profession.

Very truly yours,

Michael C. Goy, M.D.

A copy of the Official Bulletin has been mailed the Yellow Cab Company.

The committee publishes the correspondence between Dr. Overton Brooks and The American Mutual Liability Company as a guide for members. Physicians are employed to give service and their correspondence should be direct and not with any agent of the one who employs them.

American Mutual Liability Insurance Co.

Chicago, October 20th, '20.

Dr. Overton Brooks,
542 S. Dearborn Street,
Chicago, Ill.

File No. 1

Re. Lawrence Feldman

vs.

Adolph Selz Co.

Dear Doctor:

We have your bill for services rendered the above named employee, and beg to advise that we consider same entirely too high.

On October 2nd you show surgical treatment amount \$15.00. Kindly advise just what sort of treatment was necessary to give this man which warranted a fee of \$15.00. From October 3rd to 12th you show dressings amount \$27.00, or in other words you are charging \$3.00 for dressings. This is entirely too high, as the usual and customary fee for subsequent dressings is \$1.00 and in rare cases \$1.50. Accordingly we believe your

bill is too high and feel that a fee of \$30.00 would be ample in a case of this kind.

Kindly let us hear from you.

Very truly yours,

Harry R. Berg, Adjuster.

Adolph Selz Co.,
501 S. Dearborn St.

My Dear Sirs:

A customary letter came this A. M. from your insurance company offering a ridiculous sum for the services that I gave to your man Lawrence Feldman. This man was in terrible pain and agony when he came to me and was in shock. I gave him hypodermic medication to relieve him. He was suffering from a severe burn of both hands and forearms and the work done upon him was a hundredfold more than is done upon an ordinary scratch or lacerated wound, and this office gets double the amount offered by this insurance company for dressings of this nature.

I have a written order from you to attend to Mr. Feldman and he is well satisfied. Kindly attend to this matter as I do not care to be bothered with any insurance adjusters.

Very sincerely yours,

Overton Brooks.

Dr. Overton Brooks,
542 S. Dearborn Street,
Chicago, Ill.

Dear Sir:

Your letter of October 21st to hand and I have turned same over to my Insurance Company. That's what I carry Liability Insurance for.

Hoping you will come to an agreeable settlement with the Insurance Company, I remain

Yours truly,

ADOLPH SELZ,,
per E. C.

Dr. Overton Brooks,
542 S. Dearborn Street,
Chicago, Ill.

File No. 1

Re. Lawrence Feldman

vs.

Adolph Selz Co.

Injured 10-2-20

Dear Doctor:

Your letter of the 21st instant addressed to the Adolph Selz Printers Company has been turned over to us for consideration.

Please be advised that when the writer wrote you taking exception to the amount of your bill, he at least expected the courtesy of a direct reply from you. We have advised the Adolph Selz people not to send any more cases to you.

In conclusion will say, that \$30.00 is all that we are going to offer you in this matter, and if same is

not satisfactory to you, you may take other measures to collect your bill.

Very truly yours,

Harry R. Berg, Adjuster.

Adolph Selz Co.,
501 S. Dearborn St.

My Dear Sirs:

A letter from the American Liability Insurance Company and signed Harry R. Berg, came this A. M., refusing to pay for the services given to Lawrence Feldman of your firm.

I met you in your emergency and gave you every consideration, but I have not yet received any at your hand. I am positive that you can regulate matters if you so desire.

Mr. Feldman knows that I informed him of this insurance company as soon as I heard that they carried your insurance. Mr. Feldman spoke as if he would assist in the payment of his bill. I have fought this company before and I have won out and I intend to lay this before the Chicago Medical Society and I will take other methods of collecting if necessary.

They informed me that they gave you notice not to send me any more cases. Surely you are a free man and can do as you please. Other Insurance Companies send me checks daily and they do not question my fairness. I know that I have been fair to you and that is why I am writing.

Very sincerely yours,

Overton Brooks.

Dr. Overton Brooks,
542 S. Dearborn Street,
Chicago, Ill.

Re. Lawrence Feldman

vs.

Adolph Selz Co.

Dear Doctor:

Our assureds have forwarded us your communication to them of November 4th, and I can see no reason why we should deviate from the position taken by our Mr. Berg in his letter of October 27th.

In conclusion, if you desire to accept our check as indicated therein, please advise us.

Very truly yours,

G. A. Bruegger,

District Claim Manager.

Dr. Overton Brooks,
542 S. Dearborn St.,
Chicago, Ill.

File No. 1

Re. Lawrence Feldman vs.

Adolph Selz Co.

Inj. October 2nd, 1920.

Dear Sir:

We are enclosing herewith our draft for \$48.00 payable to your order in payment of your bill as rendered.

Please be advised that our Company is too big to argue and write letters to you taking exception to your bill. When we wrote you the first time we had carefully gone into this matter and were fully convinced that your bill was too high, and consequently wrote you a strict business letter taking exception to such bill. Instead of having the courtesy of a direct reply, you took the matter up with the Company, who felt just exactly the same about your bill as we did.

However, as I said before, we will let you have the benefit of the doubt, therefore are herewith enclosing our check for that amount.

Very truly yours,

H. R. Berg, Adjuster.

This correspondence should help to harden any rubber spines left in the profession.

CONTRACT PRACTICE COMMITTEE.

Thomas P. Foley, Chairman.

INDUSTRIAL NURSES ILLEGALLY PRACTICING MEDICINE

The following editorial from the November, 1920, *Long Island Medical Journal* is worthy of reproduction as showing a growing disposition on the part of nurses and lay individuals to practice medicine without proper qualifications or legal right to do so:

In an able editorial in its August number *Modern Medicine* calls attention to an aspect of industrial medicine that calls for careful investigation and, should the condition be found to be widespread, corrective measures. We are told that welfare workers, supervising nurses and others have found factories in which the diagnosis, treatment and care of sick or injured employes have been left entirely to the nurse, who has undertaken to extend her responsibilities far beyond what the law allows. Not only that, but it has been found that some of these nurses were not trained beyond a correspondence school course and that this fact was known to their employers, who apparently desired to convey the impression that they had provided an efficient welfare department for their hands, but in reality were attempting to deceive the public, the State authorities, and their employes by providing service that they knew to be inadequate. In one or two plants a physician was ostensibly employed, but the sort of attendance required of him was so restricted that it would seem that his name was merely a blind to cover the work done by a cheap nurse. It is a matter of common knowledge that the more ignorant one is, the more cocksure he is apt to be, and probably much of the prescribing of headache powders and dressing of wounds by nurses in the institutions under consideration resulted from a sense

of self importance brought about by finding themselves in places of responsibility. But in some cases it was shown that the employer dictated what should be done, and in some instances the physician himself either permitted or urged the nurse to exceed her legal privileges. Like all movements for social betterment, the establishment of physical welfare departments in industrial plants has had a two-fold motive—better work through better working conditions. There are some employers who honestly try to provide a high grade of medical and nursing care for their workers and who pay adequate salaries; there are many more who want a high grade doctor, but are unwilling to pay properly; and there are many who scheme to provide the appearance of service without its substance. On the other hand, there are doctors and nurses who have so low a conception of their calling that they will shirk where they can; and there are others who believe themselves to be adequate when they are not. All this is merely saying in some detail what we all know about human nature. To insure against just such conditions, many states have provided chapters of their public health laws defining the duties and privileges of physicians and nurses and providing penalties for those who attempt to practice medicine and surgery without a license. No nurse should be willing to incur the liability to punishment for exceeding her proper duties, and the mere fact that she had been directed by her employer or urged by the physician so to do does not excuse her. She brings discredit on herself and on her calling. Furthermore, she should be very chary of discussing medical matters with her patients. There is so wide a field for difference of opinion in so many forms of disease that those best qualified to speak are careful not to say too much, and often the effect of a careless word spoken in a layman's presence is to destroy confidence in a perfectly trustworthy doctor or to discredit a reliable method of treatment. For this and similar reasons none but a thoroughly qualified trained nurse should be employed, except perhaps as an assistant, in industrial work, the very nature of which entails responsibilities calling for nice judgment. There will arise emergencies when ordinary first aid will not be adequate, demanding tact, initiative and skill. At times, in the absence of a physician, she may have to undertake more responsibilities than the law allows and her success will depend on her training. With the full knowledge that such conditions may confront her, the untrained nurse who assumes and the penurious firm who employs her are equally guilty of a grave misdemeanor, to put it mildly. In general, the duties of an industrial nurse, as far as treatment is concerned, should be limited to those of an assistant when a physician is present and to elementary first aid when he is not on the spot. Anything beyond tends to break down the safeguards that long experience has found it essential to throw about the care of the sick and injured. It is one of the just claims of qualified surgeons that the

imperfections of Workmen's Compensation Acts permit and even foster a type of surgical care that is disadvantageous to the very men who are supposed to be benefited by the law. It is equally certain that not only does improper care in industrial plants work harm to the sick and injured but it reacts to the discredit of the service and those who give it. Also, the nurse who assumes to exceed her proper duties once oversteps them more readily a second time, and soon comes to look upon herself as qualified for any sort of professional responsibility, until the inevitable happens and some unfortunate loses a hand from preventable infection, or some neurotic girl breaks down from too much acetanilid. It is the trusting innocent that is the ultimate sufferer and his best protection is a rigid enforcement of the laws covering medical practice. In states where these laws are inadequate steps should be taken to place before the people and their law makers a full understanding of the needs of the situation, and doubtless they will correct it—legislatures seem only too ready to curb the medical profession.

IT IS ABSURD TO ATTEMPT TO MIX UP MEDICINE AND INSURANCE

PREVENTIVE MEDICINE, THE MEDICAL CARE OF THE SICK, AND SICKNESS INSURANCE ARE THREE NORMALLY VERY SHARPLY DIFFERENTIATED FACTORS WHICH CAN WORK IN HARMONY, ALTHOUGH ANY ATTEMPT TO MIX THEM UP FORCIBLY INTO A SINGLE UNIT IS BOUND TO FUNCTIONATE BADLY.

Schenectady, N. Y.

To the Editor: The following is submitted as a sort of corollary to my paper entitled "Some Problems Encountered in Attempting to Apply Insurance Methods to the Sickness Hazard," which was published in the ILLINOIS MEDICAL JOURNAL, December, 1920.

I have come very definitely to the conclusion that Compulsory Health Insurance agitation will never really quiet down until we devise some plan whereby the potential possibilities of the application of the insurance principle are actually made use of in helping to solve the insurance portion of the sickness problem. There is no question but that certain phases of the sickness problem could be to a considerable extent solved by the application of the insurance principle. There is also no questioning the fact that preventive medicine, the medical care of the sick and sickness insurance are three normally very sharply differentiated factors which can work in harmony, although any attempt to mix them up forcibly

into a single unit is found to functionate badly. Gasoline and differentials are both automobile essentials, but no one ever thought of mixing up oil refineries and automobile factories. When the problems of sickness insurance are clearly understood it is found that it is almost equally absurd to mix up medicine and insurance.

My paper, "Some Problems Encountered in Attempting to Apply Insurance Methods to the Sickness Hazard," was intended to bring out three points: First, the reason why the sickness problem as presented by the ordinary run of short duration illnesses does not lend itself normally to solution by the insurance method. Second, to show some of the mathematical factors underlying the reasons why fund-paid medical services are always poorly paid for and the method generally unsatisfactory to the physician. Third, to show some of the possibilities of applying the insurance method to the solution of the financial problem encountered in connection with the long duration illnesses.

The paper also points the way along which I believe the medical profession should work in an attempt to solve the compulsory health insurance problem. I believe that the chief provisions of any of the compulsory health insurance laws should be directed towards the adequate financial protection against the effects of the long duration, hard hitting illnesses. These are the cases talked about by the compulsory health insurance advocates, but not covered by their bills, as shown by their actuarial figures.

Actuarial data as confirmed by the actual issue of such policies by commercial companies shows that all long duration illnesses could be completely covered by low cost, with a very simple administrative mechanism, with relatively no overhead costs, and no inhibitive interference with medical progress and practice. This could be accomplished by insurance measures embodying approximately the following features:

1. The only compulsory feature would be to compel employers to provide the machinery whereby all employees who desire to could contribute by pay roll deduction to the insurance fund.

2. Wage earners to receive two-thirds wages for illness beginning two to four weeks after onset and the benefits extending not twenty-six weeks but to recovery or death.

3. Dependent members of family to receive a small cash benefit (one-tenth to one-twentieth of supporting member's wage) for all disabling illness beginning about six weeks after onset of illness and continuing with possibly few restrictions and provisions, to protect against the types of disease allied to malingering, until recovery or death. Additional premium to be paid for this protection.

4. Any provision for the coverage of medical, dental and nursing expenses should be either entirely omitted or the machinery could be provided for voluntary contribution on the part of the insured, of an additional premium, sufficient to cover these expenses, through policies entirely separate from the disability coverage. These policies would cost so much that few would take them.

Such a law would give the protection actually claimed to be sought by the advocate by compulsory health insurance. It would put the medical treatment aspects strictly up to the merits of the proposition, but would allow of the normal development of such medical care by the insurance method, if in certain communities the wage and social conditions are such as to make it really desirable.

E. MACD. STANTON, M. D.,

STANDARDIZING SURGEONS' FEES

We are reliably informed that unless present plans miscarry there will be introduced into the next Michigan legislature a bill seeking to standardize the fees that physicians and surgeons will be allowed to charge for their services.

This bill we understand is to be introduced at the instigation of a Michigan multi-millionaire and will be backed by all the influence at his command. The threat to introduce the bill is taken seriously by the Michigan physicians and an active propaganda to combat the proposed legislation is already under way.

As we have said repeatedly there is a nationwide campaign which has as its object the destruction of the individuality of the physician and a further attempt to measure all men by the same yard stick regardless of the fact what is one man's girth is another man's neckband. Standardized medical fees would destroy all initiative and stop medical progress.

A LICENSE TO PRACTICE MEDICINE IS A PRIVILEGE NOT A RIGHT.

LIKEWISE THE CHARTER OF YOUR FAVORITE HOSPITAL, EITHER OR BOTH MAY BE TAKEN FROM YOU UNDER THE POLICE POWER OF THE STATE SHOULD SOME OF THE PRESENT DAY SOCIALIZING PROPAGANDA BE ENACTED INTO LAW.

In our June issue we published the outline of a scheme for the national socialization of medicine whereby a department of health and welfare with a secretary in the cabinet would take over the control of all the agencies of healing both public and private, individual and corporate clear down to the township supervisors of the most obscure country district even including the horse that draws the ambulance. There are at the present time several socialistic schemes being propagandized, all of them attempting to bring about the same end either by one grand stroke or by piecemeal methods.

Many physicians are inclined to assume a self satisfied air secure in the belief that these socialistic schemes cannot be enacted into law or that if they should be put on the statute books they would be unconstitutional. We heard the same thing said about prohibition. We have heard a number of our eminent physicians remark that they will not cooperate with or work under any of the proposed socialistic laws. It might be well to emphasize the fact that if these communistic laws are enacted should you refuse to make the law operative your license to practice might be taken from you under the police power of the State, or on the other hand the law will be made to provide for compulsory service. Threats covering both of these phases have already been made by the proponents of the schemes. In the case of the former by a Senator of New York who told the Doctors that if they failed to make the health insurance law operative if enacted their license to practice would be taken from them under police power of the State and the latter instance by one of the high priests of the health insurance propaganda to a Doctor in Illinois who has been active in opposition in health insurance.

Kindly remember that your license to practice medicine is a privilege not a right. This statement is confirmed by the decision of the case of Dr. Dent vs. State of West Virginia, No. 129.

U. S. Reports, page 114. Likewise Doctors who feel that the charter of their favorite hospital is an inviolable contract and safeguarded by the constitution may have a rude awakening should some of these schemes be enacted into law. It is just as much a right as your license to practice medicine and subject alike to the police power of the State.

State police power is a far reaching arm of the law. It can be so construed as to cover any or all conditions affected the body politic. In order that you may learn what the police power of the State really means and that you may have a clear interpretation of its far reaching influence and possibilities we call attention to the decision in the case of the Fertilizer Company vs. Hyde Park in the 97th U. S. Reports, 659 (year 1878) and learn therefrom how long private ownership and control of hospitals and staffs would or could survive some of the proposed communistic legislation bringing about sovietization of medicine and allied agencies.

THE MEDICAL SLACKER.

The following excerpt from a talk given before the West Side Branch of the Chicago Medical Society by Dr. John S. Nagel, President-elect of the Chicago Medical Society, is so strikingly to the point that we deem it worthy of publication in the State JOURNAL:

A slacker is an individual who fails to do his duty towards his country and his fellow man. A medical slacker is the Doctor who fails to do his duty in his relation to the medical profession and in things medical.

The principal way in which a doctor lays himself liable to the application is because of his non-attendance at medical society meetings. In Cook County, to make it easy for a Doctor to avoid being a slacker because of non-attendance at meetings, the Chicago Medical Society fourteen years ago divided the County into branch Societies where regular meetings are held. These branch meetings are very interesting and some splendid papers are read and many excellent clinical cases are demonstrated. At times the meetings are well attended but at no time is the attendance what it should be; only too often the

number in attendance is so small as to dishearten men who read papers or demonstrate clinical cases. In this great West Side branch, where many splendid papers have been read and many interesting and instructive clinics held, there are dozens of doctors who never attended a meeting since the branch system was established fourteen years ago. Slackers every one of them!

Throughout the last decade and a half I have been very active in helping perfect the organization of the Chicago Medical Society. During that period the membership of the Society has increased from five to over thirty-five hundred. Less than twenty-five men are responsible for this magnificent showing. These men have worked unselfishly and unceasingly to bring this about. Today this organization yields a power both scientific and civic unsurpassed by any medical organization in the world. This same small band of indefatigable workers has done the fighting necessary to prevent the enactment of the many vicious laws that have been offered for passage at every session of the State Legislature. From time to time all of you have been called upon to assist; only a small amount of cooperation was asked of you—perhaps only to write a letter to the representatives of your district voicing your opinions on the bill in question. Did you do it? No, very few of you responded. You let "George do it." You couldn't see a direct communication between the proposed legislation and your pocketbook and so you did your part in helping to shift the burden onto the shoulders of your fellow Doctors.

Here is something for you to remember. One of these days a bill will be introduced into the Illinois Legislature that will have a direct communication with your bank account. Here is something else for you to remember. If you perform your duty in the future as you have done in the past the proposed bill will become a law and then you will be the first to criticise the officers of your Society because it was put on the statute books in spite of them.

I have in mind the possibilities of State Medicine, Compulsory Health Insurance or some radical Health Center Bill. Should some of these nefarious schemes be enacted into law the "back to the farm movement will be solved." You will be trading your microscope for a pitch

fork. I ask you if I am not right in my conclusions? On page 257 of the September number of the ILLINOIS MEDICAL JOURNAL is an illuminating article along this line.

Last but not least is the variety of medical slacker who fails to vote at all or who goes to the polls and votes for candidates for office irrespective of what is the attitude of the candidate towards things medical.

Dr. Foley, chairman of the Contract Practice Committee of our Society, has been writing a great deal on "Why the Profession Should Organize." When his ideas and recommendations are put into effect, then and then only will legislative candidates seek the views and desires of organized medicine. So long as we have the vote slacker the politician will continue to ignore our profession in civic affairs. My address this evening is not a harangue, it is a warning.

"OH, FOR A DOCTOR! AN OLD-FASHIONED DOCTOR! ONE WHO IS WILLING TO GET ACQUAINTED WITH MY FAMILY, LEARN THEIR WEAKNESSES AND IDIOSYNCRACIES."

Says Dr. Wynn, in the *Journal of the Indiana State Medical Association*. In speaking of the dangers of specialism, he goes on to show the beauties of the human body, a house not made with hands and, therefore, a sacred temple that we should be slow to tear down—what we cannot build up; that we should view wanton mutilation of the body in the name of surgery as criminal.

In this connection, is it pertinent to ask if the advent of asepsis and improved surgical technic have not led oftentimes to forgetfulness of these truths? The prevailing view of laymen is that we do forget. A brief historic review of surgical evolution during the past four decades will offer convincing evidence that the charge is true. Too often we have displayed the common human weakness of yielding to faddism; despising the old simply because it is old—forsaking the steady light of proved truth for the glare of a rocket shot into the professional sky. Thirty years ago what burdens of offense were charged to the ovaries! These organs were sacrificed and mutilated for

neuralgia, neurasthenia, hysteria, dysmenorrhea, epilepsy and insanity, and to what end? Woman was robbed of her greatest function; her body deprived of an internal secretion; and the case ultimately shifted from surgeon to neurologist! With larger reverence for the body parts, and the whole functioning organism, this unsexing would not have occurred.

Following close in sequence on this procedure has come the appalling multiplication of abdominal and other major operations—many of them imperative; most of them justifiable; a considerable residue unwarranted, if not criminal! It is rather disheartening to those of thoughtful mind to observe the insidious hardening of the medical conscience; to note the haste and lightness of thought with which major surgical attack is advised and undertaken. Very often not even time is taken for the painstaking study of a case from every angle. Instead, a short-cut method is pursued. "We will open the abdomen and see," expresses the unscientific procedure followed. It becomes our bounden duty to inquire if perhaps there is not going on at the present time an orgy of surgical excess? Everywhere hospitals, everywhere surgeons—many excellent, some indifferently equipped, others bad! Already in the wake of this surgical excess are appearing unfortunate sequelae, sure to increase with the near, oncoming years. No one appreciates more fully the truth of this statement, than the abler specialists themselves. For the correction of this trend there must come to everyone essaying to do major surgical work, a new baptism of reverence for the sacred human body. Let him get out of the rut of materialism where he sees only the special part or thing and look on the man—the pulsating, reacting, thinking man with a human soul!

The public for long insistent on specialism is now awakening to the fact that it is not an unmixed blessing. Generally the layman acknowledges great benefits from its wise ministrations. On the other hand, occasionally he runs the gamut of specialties, isms and cults; drifting from uncertainty to uncertainty, with waning confidence and depleting purse. Finally, in dire extremity, he exclaims: "O, for a doctor! An old fashioned doctor! One who is willing to get acquainted with my family, learn their weaknesses and idiosyncracies; ready to serve them by day and by night; able to treat typhoid fever, pneumonia and measles; one to whom I can tell my secrets and be not afraid!"

Finally he says that specialism is here to stay in spite of its disappointments and shortcomings. To correct its errors for its own greater glory, and the upbuilding of the profession, should be our heart's fondest desire.

PRESIDENT-ELECT HARDING CON- DEMNS PATERNALISM AND BUREAUCRACY.

THROUGH AMERICA'S CONTINUED PROGRESS WE HAVE BEEN SAVED FROM THE GROWTHS OF TOO MUCH CENTRALISM, TOO MUCH PATERNALISM, TOO MUCH BUREAUCRACY AND TOO MUCH INFRINGEMENT OF THE INDIVIDUAL'S RIGHT TO CONSTRUCT HIS OWN LIFE WITHIN OUR AMERICAN STANDARD OF REASON AND JUSTICE.

WE DO NOT WANT, AND WE WILL NOT HAVE EITHER BUREAUCRACY OR PATERNALISM.

At Marion, Ohio, October 1, in an address, he said, regarding the creation of a federal department of social welfare that in attempting such an undertaking we must avoid bureaucracy and that social justice and not paternalism must be the guiding principle.

I recognize certain dangers which are always presented when government undertakes large and detail tasks. I have said already today that we must avoid paternalism, and that we must avoid it because a paternalistic social welfare program would smother some of the liberties, some of the dignity and some of the freedom for self expression of our individuals.

In creating Federal departments for the administration of social justice and social welfare we must avoid the fearful results of bureaucracy. I am inclined to think that as between a bureaucracy of a military power which paid little attention to the regulating of domestic affairs, and a bureaucracy of social rules and regulations, the latter would oppress the soul of a country more. We do not want, and we will not have, either in America.

Undoubtedly the great blessing of our Constitution, appearing, indeed, as if our Constitution had been written by the hand of Providence, are the checks which it places upon the development in a national center of a great bureaucratic paternalism. We are momentarily irritated at times when we desire to enact measures, which appear to be dedicated wholly to the welfare of mankind, when we find that constitutional limitations prevent their legality. But we have been saved through these many years and will be saved throughout America's continued progress from the growth of too much centralism, too much paternalism, too much bureaucracy and too much infringement of the individual's right to construct his own life within our American standards of reason and justice.

I would like to point out to all America that there is grave danger at hand when centralized expression begins to take from local communities all the burdens of social conscience. The best that humanity knows comes up from the individual man and woman through the sacred institutions of the family and the home, and, perhaps, finds its most effective application in the community where life is personal, and where

there is not an attempt to cut men and women to pattern and treat mankind as a wholesale commodity.

NO CANCER IN THE ARCTIC REGIONS.

In an article in the *London Lancet*, Dr. H. C. Ross quotes Villhjalmer Stefanson, the Arctic explorer who conducted an expedition into the far North region. He states that cancer does not exist among the Esquimaux. Furthermore Dr. Ross states that he has been told by Sir William MacGregor, Dr. W. T. Grenfell, Mr. Frank Benzley, and Rear-Admiral Peary that they had never seen a case of cancer among the native tribes in the far North.

It may be assumed that cancer is absent from the Arctic regions, and the assumption seems justifiable. The fact, Dr. Ross says, gives rise to some interesting reflections. In the first instance, the Esquimaux are perhaps the most carnivorous race of human beings in the world, and consume few vegetables; therefore, the non-existence of cancer among them would appear to weaken one of the dietetic theories of the cause of this disease. There seems to be no racial or physiological difference which would exempt the Esquimaux from cancer, and, in addition, the observations of Panum, fifty years or so ago, that cancer was either extremely rare or did not exist in Iceland or Greenland, in the settlements peopled by Europeans, would imply that race does not enter into the question. Consequently, as Ross points out, the climatic explanation is the most plausible, and this tends to revive the parasitic theory of origin. The cold in the Arctic regions is too intense for saprophytic organisms to live, and diseases conveyed by aerial convection, such as "colds," are unknown. Dr. Ross is of the opinion that cancer may come in a similar category, and that its cause is an organism which invades the body from without, which is air-borne in part of its life history.

ENGLISH HOSPITALS ARE IN A HOPE- LESS FINANCIAL CONDITION.

SCHENECTADY, N. Y., Nov. 29, 1920.

To the Editor: I call your attention to the almost hopeless financial condition of the English Hospitals. Those able to pay taxes and make contributions to hospitals evidently will not pay taxes for supporting the very wasteful compulsory health insurance scheme and at the same time contribute to the hospitals. The result is that the English Hospitals are in a financial condition which it would do every compulsory health insurance advocate good to study closely. Doctors may be able to live for a time without

earning money on the cost of their education and similar items, but hospitals have to replace their worn out plumbing and make repairs once in a while or they too will die. The English Hospital situation is surely worth studying carefully.

See *The Lancet*, November 13, 1920.

Very sincerely yours,

E. MACD. STANTON.

NO MAN LIVETH UNTO HIMSELF

WHAT WOULD HAPPEN IF THE MEDICAL PROFESSION SHOULD START A BOYCOTT?

Suppose the members of the American Medical Association should hold a convention at which they adopted a resolution demanding an increase of 60 per cent in fees, a six-hour day, a 30-hour week, extra fees for overtime, and bound themselves to refuse to perform any service whatever for the public until these demands were complied with. Imagine the plight of the sick and injured, and measure if you can the state of public sentiment toward the American Medical Association.

Suppose the Retail Grocers' Association should adopt a resolution binding its members not to sell an ounce of food to members of the American Medical Association or to anyone connected with them while the unreasonable demands stood, basing their action on the ground amongst others, that the attitude of the doctors menaced the life, health and comfort of the nation in general and the prosperity of the grocery trade in particular. Imagine the plight of the doctors' families, their wives and little children.

No man liveth unto himself. No man, however rich or poverty stricken, but is dependent upon the service of his fellow men.—*Monroe (Wis.) Gazette*.

THE GAME CAN BE PLAYED BOTH WAYS

NOTE WHAT HAPPENS WHEN THE PHYSICIANS STRIKE

In 1919 the outpatient staff of the General Infirmary at Leeds, England, refused to treat miners on strike. It seems that when two miners who went to the outpatient department, the medical officer on duty informed them that he was on strike too. Subsequently he offered to prescribe for them, but this offer they refused, on the grounds that they had been insulted. The miners, of course, have stated their grievances in the local press, and the correspondence has grown, partly in sympathy with the miners' complaints, partly alleging that retaliation must be expected in view of the hardships the miners have brought upon the public. Meanwhile the aggrieved miners, having asked for an inquiry into the conduct of the medical staff, the secretary of the infirmary has intimated that the committee will concede the request. The incident in question is an exceptional one, and we may believe without precedent. But the miners have only themselves to blame for its occurrence. Their unlicensed attitude in regard

to their work having called forth general public indignation accompanied by hardships from which they themselves are free, it is natural that resentment against them should take an active form just to remind them that the game they play can also be played by others. A medical man with no coal in his house because the miners have refused to work, can hardly be expected to regard with any degree of effusive complacency, miners on strike who gratuitously seek his aid at a hospital. Medical men are not exclusively humane; they are also human like other people.

IMPORTANT DECISION REGARDING THE WRITING AND FILLING OF NARCOTIC PRESCRIPTIONS

AIDING AND ABETTING VIOLATION OF HARRISON ACT BY ISSUING PRESCRIPTION

A physician duly registered as such with the collector of internal revenue and who had paid the tax was charged with violation of the Harrison Narcotic Law by unlawfully and willfully aiding and abetting certain named druggists in making illegal sales of morphin and cocaine, by giving the persons to whom the sales were alleged to have been made prescriptions, which were by them presented to the druggist and filled by the druggists. The persons to whom the prescriptions were issued were at liberty to have them filled by any druggist selected by them. There was no preconcert between the physician and the druggists charged. It was charged that the defendant contemplated that his prescriptions would be filled by druggists who knew that they were issued to gratify the appetite of addicts for the drugs, and not the alleviation of suffering or the cure of disease. The illegality in the sale was charged to have consisted in the act that the sale was made neither to one who had or was entitled to have an order blank, nor was it made on the prescription of a physician within the meaning of exception (b) of Section 2 of the Harrison Act. That exception is as follows: "To the sale, dispensing or distribution of the aforesaid drugs by a dealer to a consumer under and in pursuance of a written prescription issued by a physician * * * registered under this act."

The Circuit Court of Appeals, Fifth Circuit, holds that notwithstanding this exception, a sale by a druggist who knows that the prescription was issued to gratify the holder's appetite, and not to cure disease or alleviate suffering, violates the law, and the physician issuing the prescription, knowing it is to be filled by a druggist having such knowledge, aids and abets the violation. Knowledge by a druggist that a prescription under the act was issued to gratify the holder's appetite, and not to cure disease or alleviate suffering, is essential to guilt, and negligent failure to inquire will not take the place of knowledge. But it was held that an instruction erroneously authorizing a conviction, though the druggist had no actual knowledge that a prescription was wrongfully issued, was not ground for reversal where reasonable men could

have drawn but the one inference that the druggist had such actual knowledge.—*Doremus v. United States*, 262 Fed., 849.

HOW TO TELL THE AGE OF EGGS

Speaking of age, it is not always necessary, in making a diagnosis, to know "hold old is Ann?" In fact, a person's age is considered to be a matter so strictly personal that in the case of the fair sex, some elasticity in veracity is, by common consent, allowable. However, the question of the age of eggs is one of importance to physicians, his patients and the housewife. The psychic process by which the grocer, by means of signs, has been able to camouflage the exact age of an egg, will soon be a thing of the past, for we are told that eggs being placed in water will complacently reveal their true maturity. The exact age of an egg is indicated by the position it assumes in water.

A new laid egg rests in the water horizontally. One from three to five days' old assumes an angle of 30 degrees; at the end of eight days, the angle becomes 45 degrees; after three weeks an angle of 75 degrees is reached, and when a "new laid" egg is a month old the horizontal line has vanished from its calculation, and it jauntily assumes a vertical position. When an egg begins to show senility, although still masquerading on the counter under the sign "fresh," it will float, yet its contents would probably prove an insult to the olfactory organs. As these tests are easily applied, it can be seen that hereafter we need not be deceived by signs, and that the age of an egg can be determined more readily than that of the fair sex.—*Pharmacal Age*.

THE INDIVIDUALITY OF THE GENERAL PRACTITIONER MUST BE PRESERVED. HE MUST NOT BE SWALLOWED UP AND OVERSHADOWED BY EACH AND EVERY SPECIALISM NOR LOST IN MASS FORMATION.

EXCERPTS—BY THE PRODIGAL
PATERNALISM

The tendency of the age is toward paternalism. Paternalism is doing for the man what he should do for himself. It is the continuation of childhood care to the adult. "Paternalism is the principle or practice of a government or governing body that undertakes to supply needs or regulate conduct of the governed in matters affecting them as individuals as well as in their relation to the state or governing body and to each other on the assumption that it can best determine and secure their highest welfare."

The bug is in the medical profession. The propaganda is seen cropping out in the advocacy of the wholesale treatment of the sick. The germ is in corporation practice and so long as it was and is restricted it serves a purpose and has a place.

The principle has a grain of truth in it; but when carried too far or continued too long in practice tends to destroy the purpose it serves. This was illustrated

in the *Him*. As a paternalistic machine en masse, he was almost irresistible. But when left to himself, individually, without somebody to tell him what to do, the machine failed and was junked.

In other words paternalism destroyed the initiative of the individual units and when separated or the connection broken, failed to function effectively and was *Yorked*. This is a weak point in paternalism.

Communal housekeeping is another illustration of fatherly care elongated—and ennuied. A readjustment is on the way in the practice of medicine; and surgery has set the pace. But the change must be made in such a way that the individuality of the general practitioner is preserved. He must remain the prominent factor in the profession. He must not be swallowed up and overshadowed by each and every specialism nor lost in mass formation. He must be where he can stand up and be counted. In this way his personality is preserved. He is put on his mettle. When left to himself he will not be helpless. He can be identified, he is stimulated to action because of a personal responsibility. Failure and success are both stimuli to work, study, investigation and progress.

It is well to have a general supervisory body, but each physician must work out his own salvation in his own way. He must be protected in his patients in so far as he is able and capable of building up a practice and holding it. He must not be interfered with by paternalism or specialism.

The community hospital is one way of protection. It need not be elaborate, but it would be a better place for the sick and a cleaner one than the average home. The expense would be but little if any more. The care would be more satisfactory, each doctor could follow his case, be responsible for it and get credit or censure as he might deserve. He would not get lost in the shuffle of mass formation and specialism—or paternalism. It would stimulate him to study and to investigate for himself. "As iron sharpeneth iron so doth the countenance of a man's friends." The association of the community physicians would broaden the vision of each one and the intimate acquaintance, each with the other, would enable them to do team work to the betterment of the community sick and to their own uplift.

A recent graduate in medicine must not get chesty. He must disabuse his mind of the nebulous idea that a physician lives outside the normal human life; outside the life of the laity. He should remember that he is one of them, only more accentuated. That he knows physical and mental ills and the source from which they come and some of their causes. He must not assume the air of "Now, God, I'm here"—of the pseudo-cult. Although a full fledged M.D. and entitled to the name and honor, he must be patient and discreet. By so doing he will get along better than Alex Blank who came home a fresh M.D. When his old neighbors began to "Alex" him as usual, he said to them: "I want it to be distinctly understood that from now on I must be addressed as Dr. Blank." And poor Alex is wondering why he failed in practice in that community and had to move on. The young

graduate cannot know from experience that, when old friends and associates who employ him continue to call him Lewie, Ed or John, it is a mark of the highest esteem and of true and genuine friendship. The name is considered bigger than the title.

Job work in medicine does not get the best results. This is illustrated in government work. The work is done neither as well nor as economically as in private practice or business. The weak link in the chain of job-practice is the lack of personal responsibility.

The job work in an institutional or a corporation medical work shop, if cheaper than in a private one, is done at the expense of material. This waste and destruction of material makes it more costly to the party furnishing it. In a corporation where thousands of men are employed the institutional medical work shop appears to be the only way out. At any rate it continues and no other adjustment is in sight. A readjustment appears to be on the way requiring corporation physicians and surgeons to confine their practice to corporation work. This can be done in the large centers or where there are corporation hospitals. It would work a hardship to the sick or injured employed outside of the places mentioned.

The cost to the corporation would be no more, for the employe foots the bill. But it seems that there is no good thing that is all good. A corporation has no soul, and a doctor, who is supposed to have one, will become corporationized. Like begets like. And the doctor confined to corporation routine practices loses touch with the outside world and the human kinship and sympathy that spurs the private practitioner on and makes life more worth while to him. The corporation doctor with a fixed salary has a financial advantage over the outside doctor who depends upon his private practice. And there is a tendency to slight the job work if the private or outside work pushes the corporation doctor. Our talk so far has gotten us in the fix the cooper was in who had his son get in the barrel to hold the head up while he put the top hoop on and headed the boy up in the barrel.

However, it is with the hope of fanning the flame of progress and betterment into present methods of dealing with the corporation sick and by doing so help to remove the wall of partition between the private practitioner and corporation doctor and to equalize the advantages, thus removing all friction, and to see "how good and how pleasant a thing it is for brethren to dwell together in unity."

The meat packer's profits are made from what he used to throw away. The medical profession is slow in learning the lessons the packer has learned and used to his enrichment. There is too big a minority of patients treated outside the regular profession. This is a waste or loss to the profession. It is carelessness or a lack of appreciation by the physician of the importance and value of this waste product to him. He not only sustains a loss, but he limits his field of usefulness by a loss of clientele. If this is not true, why do so many patients go to the uneducated healers?

An educated physician knows man as he is. He knows him physically, mentally and morally. He is

prepared to treat him as a trinity. He should do so. By so doing he protects himself and the profession and adds to his own well being. He protects the patient and does away with sham and hypocrisy. The physician is prepared to treat the patient suggestively—Christian Science—when suggestion alone is indicated. He is prepared to find the bumps, knots and spinous processes along the backbone. To find the sore places or tender spots and rub them, knead them and yank the neck and stretch the spinal column and make it crepitate; pound him over the origin of the solar plexus two dollars' worth, and the patient will feel better than if you give him a dose of salts. Give him a half to a dozen treatments and you will cure one-half of your old lame back neurotic patients.

This talk may amuse you or disgust you, but if you will go with me some day to the chiropractic school in this city where from forty to fifty patients are treated every day and see the good results of such manipulation, you will think better of the by-product and begin to use it yourself.

In osteopathy the physician is the man prepared to do the work. And so on down the line of so-called specialties. The physician has the advantage in diagnosis and would not massage, osteopathize or chiropract a purulent appendix, an aneurysm or a necrosed spine. There is a world of work for the general practitioner if he will conserve it and do it aside from the recognized scientific specialties. It will also broaden the field of medicine for the general practitioner. He will be relieved from the fear that legitimate specialism will circumscribe his practice to the navel.

When The Prodigal began the practice of medicine he prescribed one-tenth of a grain of calomel for a dose. The profession called him a Homeopath. Such sized doses were considered infinitesimal. They all prescribe them now. He met the Homeopath, the Eclectic or the midwife at the bedside, said "what was said before the patient and family, trusting to the largest pole knocking the persimmon. He was never vanquished. There was nothing in those days in athies and ectics to vanquish.

The chiropractor, osteopath and many other technical special pseudonyms are getting the milk out of the cocoanut and the educated physician gets the shell. Whose fault is it? Get busy. Study human nature. Meet the wants of humankind. Treat them as you find them and not as you would have them to be. Gold is where you find it. If you have a patient, keep him. Meet his requirements. If he is visionary, imaginative, flighty, hysterical, off mentally, physically or morally, try and measure up to the occasion and don't lose him from lack of ability on your part.

Man is a faddist. A faddist is an eccentric. An eccentric is out of center—an irregular person, an oddity. Some persons are more so than others. But none are exempt. There are physiologic and psychologic faddists. In the running they are neck and neck. Both are probably harmless. They come out of the same hole they went in.

Fletcherism is a harmless fad. The physical force

or energy required to pulverize the food into atoms equalizes in loss the benefit resulting in its digestibility. Hence, don't overwork the masseters, unless the mind needs it. The chewing gum habit is an illustration of the psychologic help or therapeutic benefit. It is a question, then, in its use, of dollars versus sense.—*Kansas Medical Journal*.

THE STATE DOES NOT OWE EVERY MAN A LIVING, BUT IT DOES OWE ITS CITIZENS AN OPPORTUNITY TO MAKE A LIVING

The sentiment of fraternity generally will endorse the condemnation of Compulsory Health Insurance, so eloquently made by Mrs. Alice B. Locke of the Woman's Benefit Association of the Maccabees. We quote:

"The underlying principle in a democracy is not that the State owes every man a living, but rather that the State owes its citizens an opportunity to make a living, and in no country in the world can any man or woman who is able and willing to do an honest day's work for an honest day's pay find such wonderful opportunities as these United States afford. An immense gulf separates our laboring classes from the poverty-stricken, brow-beaten lower classes of Germany who so gratefully accepted the sop of social insurance thrown to them by the astute Bismarck. State paternalism is not wanted, and I feel sure will not be tolerated in this country.

"The proponents of the bill tell us of the great economic loss due to sickness, but they very carefully refrain from calling attention to the fact that the economic loss on account of strikes is about twice as great as the loss from sickness. So that it would seem that this entire problem of reimbursing the people and the state for the economic loss from sickness is a simple matter of employer and employee getting together to eliminate all strikes, thereby not only enabling the worker to meet his doctor's bills but leaving him a tidy sum to set aside for the future.

"Compulsory Health Insurance is not welfare legislation. It is purely socialistic. It is class legislation of the most vicious type. It would compel the thrifty, moral, independent citizen to accept a thinly disguised form of poor relief, which he neither needs nor desires; it would compel him, against his will, to contribute to the payment of doctors' bills for a host of habitually immoral-living people who are financially able to provide for themselves, but many of whom prefer a system of charity to honest work and thrifty planning for the rainy day."—*The Guide*, Nov., 1920.

WHAT IS THE FATAL DOSE OF EPINEPHRIN?

Fischer (*Munchener medizinische Wochenschrift*, July 23, 1920) reports a case in which by mistake of a nurse, in place of the usual 1 per cent, procainepinephrin solution, 10 c. c. of 1:1,000 solution of epinephrin were injected into the skin and muscle of the

leg of a man of 35 in connection with an operation for bone fistula from a gunshot wound. The aim was to block the peroneal nerve at the head of the fibula and the tibial nerve above the ankle. Anguish followed the injection with severe pain in the neck and the back of the head, and palpitation of the heart. The pupils dilated and contracted, and in about six minutes death ensued, with manifestations of heart failure. During this six-minute interval the pulse was not perceptible to the finger. Autopsy several days later revealed status thymolymphaticus but no valvular lesions. There was no evidence that the epinephrin had been injected directly into the blood stream. The author was personally convinced that it was a case of epinephrin poisoning, but in view of the pathologic condition of the thymus he felt compelled in his decision to take an indefinite attitude. The dilatation of the pupils, together with the pain in the head and the imperceptible pulse pointed to epinephrin poisoning, a general spasm of the vessels with consequent anemia of the brain. He, therefore, recommends caution as to the size of the single dose, but adds that, owing to the transient effect of epinephrin, the total daily dose need not be so carefully controlled.

COFFEE DRINKING INCREASES

According to figures compiled by the Bureau of Foreign and Domestic Commerce of the Department of Commerce more coffee was consumed in the United States during the year ended June 30 than in any previous year on record. The total coffee consumption in continental United States for that period was 1,358,000,000 pounds and the per capita consumption 12.7 pounds. This is a total increase of 399,000,000 and a per capita increase of 3.71 pounds over the preceding twelve months. It is estimated, on a basis of forty cups to the pounds, that this increase is equivalent to sixteen billions of cups of coffee.

WHY STUDY MEDICINE?

"THE THREE SNAKES"

When you were in school did you ever try to solve the problem of the three snakes, who had arranged themselves in a circle? Each snake had the tail of a snake in his mouth, and in turn had his own tail in the mouth of the snake just back of him. One, two, three, each snake swallowed a snake. Now, how many snakes are there?

Those of you who have not read Dr. Warren Johnson's article in the December, 1919, number of the *ILLINOIS MEDICAL JOURNAL*, would do well to spend about fifteen minutes on this brief outline of the economic proposition that confronts us. You have all had experience with insurance companies cutting your bills. You send them an itemized bill for \$25.00. You will receive a letter from them about as follows: "Your bill for professional services rendered to Case No. 3561, received. The fee for industrial surgery is \$2.00 for first aid, \$1.00 for each subsequent dressing.

Enclosed please find check for \$12.00." What do you do? Keep the check or send it back? You might say I make my bill high in order to come down. If so, enlarge your shingle to include the words, "Cut Rates." These are facts, and an actual quotation from a letter, and who is at the bottom of it?—A Doctor.

We are now informed that our benevolent social reformers have opened a free venereal clinic, and that all, regardless of race, color, or previous condition of servitude, may receive free treatment or at cut rates. We are told that "Eleven specially trained physicians are on the staff," and that if he attends to his job he will receive \$60.00 a month, "and for this reason are rarely absent from the clinics." Who is at the bottom of this?—A Doctor.

On October 7, 1919, the *Chicago Tribune* printed a list of the relative salaries of city employees. The Medical Service was placed first on the list, and common labor last. On first glance you would think that medical service received the highest pay, but reading the figures you will see that medical service should have been placed next to common labor. The doctor receiving \$1,427.00 per year, and common labor \$1,265.00, a difference of \$162.00 per year. Who is at the bottom of this?—A Doctor.

You all remember the time when we were supposed to examine school children "free." You also remember how quickly this stopped when some of the doctors had the "guts" to charge for this examination. Who was at the bottom of this?—A Doctor. We will not mention the Harrison Narcotic act, or the proposed Health Insurance measures. Let a political doctor get a lifelong job at Springfield at \$12,000 a year and the general practitioner will last about as long as the proverbial snowball.

What does this all mean? We can not blame the politician for making a political football of us. We can not blame the insurance companies or corporations for buying us at their own figures. We can not blame the dear public for accepting free service. We can not blame the people for leaving their automobile around the corner and taking their children to a free clinic. Do you blame the public for believing that the extremely rich and the extremely poor receive the best medical treatment? What do you expect the public to do when they see in the street cars, in the public toilets, in the press, in the movies, in public lectures and schools, in the factories, free medical and surgical service, freer than salvation and in many instances much more *compulsory*. We have not been foreclosed, but we have simply sold out, and just like us, *to the lowest bidder*. The public still has faith in us. The politicians, reformers, uplifters and corporations have taken off our trousers and discovered how our knees are shaking. The trouble is with us. We know the etiology and diagnosis but have not the stamina to apply the treatment. There is no use putting a lightning-rod on the house, hoping that will clean up our kitchen. When a patient comes into your office do not be afraid to talk money and if they do not start the subject, *you start it*. The more money you collect the more independent you will be of a

salary. Money and medicine are not incompatible. They mix very well, and taken in large doses you will be surprised how much better you feel, not to mention the patient.—*North Shore Bulletin, Chicago Medical Society*.

Note: Contrast the above with the wages paid the driver of a pie cart. Under the present scale they make \$90.00 a week wage, working only eight hours, no holiday or Sunday work, and half days Saturday. Contrast the hours of work of the latter with the twenty-four hours a day required of physicians—no libraries to maintain, no fourteen years of extra study nor the expenditure of fifteen or twenty thousand of already earned money to pay for a medical education, together with a loss of money that could be earned the fourteen years mentioned in the capacity of a driver of a pie wagon, plumber, or some other equally remunerative occupation.

NEW AND CRITICAL DATA CONCERNING THE RELATION OF THE SEXUAL AND THE PSYCHIC INSTINCTS

Bab believes that for sexual desire it is necessary to have the co-operation not only of the interstitial cells of the sex glands but also the prostate, pituitary, pineal glands and the sympathetic centers of the midbrain. The relationship between psychoses and psychopathies and the sexual function is explained by the supposition that a change in the nature of the hormones coming from the sex glands acts upon a degenerated central area in a condition of reduced function.—Bab (*Jahreskurs f. arztliche Fortbildung, Jan., 1920*).

AMENORRHEA AND VIRILISM AT 34 FROM EMOTIONAL STRAIN

In the *Berliner Klinische Wochenschrift*, October 7, 1918, Alexander reports the case of an early menopause due to emotional strain. The woman was 34 years old. She had had no news from her husband, who was at the front, for 12 months. She had a great deal of anxiety and care from a financial standpoint. The menses gradually lessened and finally ceased entirely. Menstruation began at 15, was always regular, never excessive. Since this menopause she lost weight, the breasts atrophied, skin became dry, coarse and wrinkled, the voice was deep and a heavy growth of hair appeared on the face which became decidedly masculine. Then the hair began falling out and the skin became wrinkled and old, a true case of gerodermia. She walked with a heavy tread, her appearance and tastes were entirely masculine. The heart and lungs were normal, there was slight ptosis of the stomach and kidneys and pronounced dermatography. The uterus was about the size of a small plum, the ovaries were normal, but rather large and hard but the surfaces were smooth. Sexual desire had never been well developed. In this case of aplastic hypogonadism, care, worry and fear led to cessation of the supply of feminine stimulating hormones with con-

sequent excess of masculine hormones from the suprarenal cortex or pituitary.

MEDICAL LEGISLATIVE HEAD- QUARTERS ESTABLISHED IN SPRINGFIELD

The Council of the Illinois State Medical Society at its December meeting elected Dr. John R. Neal, Ferguson Bldg., Springfield, Illinois, as the representative of the State Society to look after legislative matters during the present session of the legislature.

All matters pertaining to medical legislation should be referred to Dr. Neal whose committee will see that each item is properly looked after and referred to the proper parties for attention. We hope that the medical profession of the State will co-operate to the fullest extent with Dr. Neal and the other members of the legislative committee.

"DOC" KNOW THYSELF

G. FRANK LYDSTON, M. D.

CHICAGO

Speaking in a general way, the doctor does not know just what relative position he occupies in the social scheme. He has a subconscious impression that his place is an anomalous one—and that's as far as he goes. It remained for a policeman to show the profession just where it stands. We have a new Chief of Police in Chicago. He is a man of advanced ideas. He believes that the policeman *can* and *will* catch thieves—if he is paid enough. The *noblesse oblige, esprit de corps* and "duty" stuff doesn't go with the Chief. And so, he wants \$2,500,000 more pay for the police.

Incidentally, he has broadened the scope of his attempts to get more efficient social service. Note the following from the "world's greatest newspaper"—the *Tribune*:

"Though unmentioned in the chief's statement, policewomen, operators, matrons, engineers, janitors, surgeons, and dog catchers will be included in the chief's recommendations."

"Hevings!" The millenium hath "arriv!" The surgeon at last is "placed"—a little lower than the janitor, but, Allah be praised! a step higher than the dog catcher. We will pass over the Chief's ignorance of the fact that the doctor, un-

like the policeman, tries to do just as good work for nothing as he does for lucre, and thank the astute police head for seeing us as we never have been able to see ourselves.

Let every physician clip the foregoing and paste it in his hat.

Medical Journals all over the globe please copy.

POOR OLD "DOC"

And when like dog, he's had his day
And his poor soul hath passed away,
Some grateful guy in tearful mood,
May tell the world, how very good
The dear departed doctor was,
And thus win—for himself—applause.

NORTH CAROLINA DOCTORS OPPOSE TREATMENT OF DISEASE BY THE STATE BOARD OF HEALTH

On November 4, 1920, The Guilford County Medical Society passed the following resolutions, a copy to be sent to the Secretary of each County Medical Society and to the Secretary of the State Board of Health:

1. We heartily endorse the Educational Campaign which has been instituted by the North Carolina Board of Health and which has been successfully conducted by them for a number of years. We believe that this Campaign of Education as instituted by the State Board of Health has done much to stamp out infectious diseases and has prevented the spread of communicable diseases. The education of the people along health lines has saved a great number of lives.

2. We do not believe that the State Board of Health should institute a treatment campaign for any disease or condition. The physicians of North Carolina, who are licensed to practice by the constituted Board of Examiners, are fully qualified and in number sufficient to take care of the indigent sick and none will suffer for want of medical attendance.

3. The Campaign instituted by the State Board of Health for the removal of tonsils and adenoids has been unnecessary, expensive and reflects upon the will-
ingness of the physicians of the State to take care of these cases. In the main, the cases that have been operated on have been at places unsuited for operations on the throat or any other surgical procedure. Operations conducted in school houses or places that have not been especially constructed for this and in the presence of a great number where the patient could not have the best advantages, are conducive to bad results, and owing to the congestion incident to these clinics, in many instances, are dangerous to life. In

Guilford County the men doing special work along this line have always been anxious and willing to give to any poor person, who may need their service, every consideration and their best efforts free of all charges, but these men are not willing to operate on cases that are able to pay without compensation and indeed we believe that the local men are more familiar with the financial conditions existing in this community than the State Board of Health.

4. We believe that every operative case should be studied and a complete examination made and a careful history taken, then treated when the operator is not forced to tax himself or his assistants, avoiding excitement, rush and a wholesale way of doing things.

5. The treatment of diseases as instituted by the State Board of Health is looking toward socialistic medicine animated by a socialistic spirit and is a step toward State paternalism, to which we emphatically object.

6. A Committee is appointed to confer with the State Board of Health and with the Legislative Committee of the North Carolina State Medical Society in anticipation of the proposed medical section of the Workmen's Compensation Act.

THE LATE EVIL EFFECTS OF ANESTHETICS

The evil after effects of anesthetics may develop during their administration in the shape of some acute complication, a number of hours afterwards, as in so-called post-anesthetic acidosis, and perhaps not for many days afterwards in the sense that the use of the anesthetic produces a disturbance in nervous balance and control. Much has been written in regard to the effects of these drugs upon the nervous system along the line of their ability to increase shock psychically and physically, but too little attention has been paid to their ultimate effects.

It not infrequently occurs in the experience of the general practitioner that he refers a patient for a surgical operation, that the operation is survived, that the surgical task is well performed, that perfect healing occurs and the patient is returned to him as an operative recovery; but he learns by observation, or by the patient's statements, or the statement of her friends or relatives, that she is irritable, difficult, and often prone to tears for inadequate cause. In other words, the anesthetic has passed away in its effects so far as its immediate influence is concerned, but has left a stigma upon the nervous system which in many cases lasts for days or even months, and this is not surprising when one remembers that these drugs are given to persons already disturbed psychically and nervously by their illness, that they transfer the patient from consciousness into unconsciousness with great rapidity, and that the return to consciousness, if the drugs have been properly administered, is also very rapid. So far as we know, the development of surgical anesthesia with its associated uncon-

sciousness is perhaps more closely akin to what actually takes place at the approach of death than any other experience to which a living being approaches before the actual end comes, and so it is not surprising that late effects occur, which for a time at least may make the patient even more miserable than the condition for which the anesthetic was given.

Interesting investigations within very recent times upon this psychical effect of anesthetics have been made upon animals, and we think it would be interesting if some of the laboratories devoted to the influence of the effects of drugs upon psychical processes would study this matter more thoroughly in human beings. Mora has studied the effects on the psychical processes of albino rats, using what is known as the circular maze invented by Watson. By the use of this maze one can study the rate at which albino rats exercise their mentality and memory. Placed in the maze they rapidly learn to find their way through it by the shortest route and in the quickest time. In additional investigations made by both Mora and Nacht they administered the three commonly employed anesthetics, ether, chloroform, and nitrous oxide with oxygen, to rats after they had become skilled in going through the maze, and studied them with special reference to how soon they regained their normal intelligence after the anesthesia was over. It was found after chloroform the rats were depressed for a very long time in the sense that their memory was impaired and that their agility was diminished. Ether, however, did not produce much depression unless given over a long period, but even when so used the animals recovered more quickly than after chloroform. As would be expected, the use of nitrous oxide and oxygen anesthesia was the least depressing of the three in its late psychical effects.

While we are not inclined to attach too much importance to the experiments upon albino rats as applied to human beings, nevertheless this line of investigation opens up a wide field for interesting study and confirms the views of those who accurately study their cases after anesthetics have been given.—*Therapeutic Gazette*.

FATALITIES FOLLOWING SALVARSAN

Blanton classifies reactions of the salvarsan injection as:

Anaphylactoid reactions, appearing during the administration of the drug, lasting fifteen to thirty minutes, and characterized by sensation of burning in the mouth, flushing of the face, injection of the mucous membranes, facial edema, nausea, vomiting, and a sense of suffocation. Occasionally the pulse becomes weak, the patient pale, and finally unconsciousness intervenes. Very rarely the patient dies. The anaphylactic nature of this reaction has been investigated by Swift in guinea-pig experiments. He believes that by salvarsan injections the patient's own serum may be sensitized—so changed that it acts like

a foreign protein and is chiefly responsible for the reaction.

Deferred reactions, appearing several hours after the administration of the drug, lasting twelve to twenty-four hours and characterized by chills, headaches, vertigo, nausea, vomiting, diarrhea, fever, generalized pains, and occasionally skin eruptions.

Late reactions, appearing after twenty-four hours, and often not until the second or third day. Probably the majority of the fatal cases fall into this group. Beginning mildly with vomiting, diarrhea, and fever, these cases rapidly manifest headache, muscle twitching, dilated pupils, absent reflexes, and after a brief illness die in coma.

Other untoward effects, though less alarming, are encountered in: (a) Herxheimer's reaction, in which there is an intensifying of the luetic rash, said to be due to the sudden liberation of endotoxin, or to insufficient dosage; (b) the so-called neurorecurrences, in which neuritis develops in the cranial nerves, but especially in the optic and auditory nerves, an effect probably produced by the stirring up of a pre-existent process in these locations; (c) morbilliform skin eruptions; (d) jaundice; (e) albuminuria.

As Schamberg and his coworkers have shown, unfavorable reactions from arsphenamine are probably the result of impurities in the drug-identified by-products of synthesis, which for want of precise definition are spoken of as substance X. In their opinion the presence of this substance in certain batches of arsphenamine is undoubtedly the cause of the toxic phenomena encountered.

The four cases reported fall into the third group of reactions. All followed an intensive course of salvarsan treatment consisting of four to six intravenous doses. There was an average interval of four days between injections. Four to six-tenths grams of salvarsan were given at a time. Two days in three cases and three days in the other case intervened between the time of the last salvarsan treatment and the onset of the illness. The time elapsing between the admission to the hospital and death was two days in three cases and one day in the other. A striking similarity in symptoms as well as in post-mortem findings existed in all four cases. After a symptomless latent period of about two days the development of sudden and profound coma was characteristic and dominated the clinical picture so that it was difficult to elicit any focalizing signs at all. There was no cranial nerve palsies. The pupils were dilated in two cases, in two unaffected. During the last twenty-four hours of life the reflexes disappeared in all four cases. Half of the cases had convulsions. Cheyne-Stokes breathing was present in all cases, and death was apparently due to failure of the respiratory center.

Pathologic study of the brains of these four cases showed similar lesions. These consisted in minute hemorrhages, scattered through and confined to the basal nuclei and that part of the cerebrum bounding the lateral ventricles. These were associated with a

softening confined to this locality and seen easily on gross examination. Cerebral congestion and edema were marked. Increase of cerebrospinal fluid was not a conspicuous finding. In only one case was there a slight fatty degeneration of the liver.

These fatalities all occurred in healthy young men. Four cases occurring at one time could hardly be explained as an idiosyncrasy. The technique of administration can be exonerated in view of the fact that hundreds of other injections were given by the same method without reaction. The cause of these mishaps is undoubtedly to be found in the toxic by-products of salvarsan synthesis, the exact nature of which is unknown.—*American Journal of Syphilis*, October, 1919.

MATERNITY BILL PASSES UNITED STATES SENATE

Senate Passes Maternity Bill.—The bill "for the public protection of maternity and infancy," through co-operation between the Federal and State Governments, was passed by the Senate on December 18. The bill carries an annual appropriation of \$1,480,000. Of this, \$480,000 is to be apportioned equally to the States, and the remaining \$1,000,000 will be apportioned in the proportion which the population of each State bears to the population of the United States. In order to obtain its share of the money appropriation a State may create or designate an agency which shall have power to co-operate with the National Children's Bureau in the administration of the act. The Children's Bureau has the authority to recommend the appointment of Advisory Committees, State and local. Provision is made for extension courses in the hygiene of infancy and maternity in connection with State universities. Not more than 25 per cent of the amount granted to a State may be used for this purpose. It is further provided that no payment out of the appropriation of \$1,000,000 shall be made to any State until the Legislature of that State has provided an equal amount from the State Treasury. The bill which now goes to the House contains much of the material offered by the League of Women voters as a suggested plank in the platform of both political parties last summer. An effort has been made to get the measure through the short session of Congress so that the matter can go to State legislatures, meeting this winter. The measure requires co-operation on the part of the several States through legislation. The Massachusetts Civic Alliance has issued a strong protest against this bill, calling attention to the fact that, as there are 2½ million births annually in the United States, the cost to tax-payers will be enormous. Whatever may be brought under government ownership and control, it says, the American home should never become socialized.

THE FOLLOWING IS THE PROTEST

MATERNITY LEGISLATION A BUSINESS SCHEME

Corporation legislation is often just, sometimes unjust. The Cambridge Subway Deal at last November's

Special Session cost Massachusetts tax-payers \$8,000,000 for 50 years. But the Maternity Innovation, at next November's Special Session, may cost Massachusetts taxpayers from \$100,000,000 to \$200,000,000 in the next 50 years. Do you want this in your State? How do your representatives stand in the approaching session?

The Massachusetts Civic Alliance, a non-partisan organization, solely for the public good, views with misgivings the various socialistic movements. It feels that whatever may be brought under Government ownership and control, the American home should never become socialized. Bills for Federal and State Maternity aid in childbearing have been recommended by various societies and public officials. But the movement has been worked up through the expenditure of thousands of dollars.

U. S. Senate Bill 3259 provides for Federal aid to the States in providing public money from the National treasury and a method of co-operation between the United States and the States in supplying medical, hospital, nursing and obstetrical care at childbearing. As there are $2\frac{1}{2}$ million births annually in the United States the ultimate cost to tax-payers will be enormous, possibly \$100,000,000 every year.

In Massachusetts, on June 3d, the vote was 140 against, to only 20 for the Maternity bills.

The enclosed circulars tend to expose some of the faults of the scheme. But there is another grave objection. It would be a fraud upon tax-payers to make them pull the chestnuts out of the fire for life and health insurance. If they take risks and spend money employing nurses to attend at the sick bed-sides of their policy holders, they do this as a business proposition. Let them pay their own business bills.

Therefore, it may as well be asked plainly if Maternity measures ought to be enacted while heavily financed from secret sources and which would be of great financial advantage to those who insure many of the mothers and children of the nation, and when infant mortality in eight years has declined from 131 to 101 per 1,000 births? State control is likely to increase mortality.

Your society is urged to bring appropriate influence upon your Senator, Congressmen and State Legislature.

MASSACHUSETTS CIVIC ALLIANCE,
Eben W. Burnstead, Secretary.

THE FOLLOWING PROTEST FROM THE DAILY NEWS:

During the last session of our legislature there were pending bills to make expectant mothers a charge upon the Commonwealth, at their wish, both before and after confinement. The News repeatedly opposed the measure. The opposition was led by the Massachusetts Civic Alliance. Early in June the measure was defeated by a vote of 140 to 20. There was passed a resolve authorizing the appointment of a commission to study the matter and report at the special session,

which is to be held after the election. There is not a little reason to fear that, with a favorable report from the commission, the legislature will launch the Commonwealth upon this vastly expensive scheme. Last spring there was no appearance of money back of the maternity legislation proposed during the last two sessions, though defeated in both. But now, since the legislature was prorogued, there has come to the surface a skillfully managed movement to secure maternity legislation throughout the nation. Money has been provided to push the propaganda in the State and in the Nation. This movement has already spent thousands of dollars to secure nation-wide maternity benefits. Money was provided some years ago to secure the passage of a State Health Insurance measure which included maternity benefits. That was defeated. One of the factors leading to adverse action in Massachusetts was the refusal of the advocates of the measure, when questioned by the commission, to disclose the source of the \$30,000 they claimed their association had.

The advocates of the maternity benefits say that they do "not mind, in the least, spending any reasonable amount." Industrial insurance, which now provides nursing and care for its insured, would be glad to have the Governments of the State and Nation lift this burden from their shoulders. It is not strange they are among its advocates. It would be a fraud upon taxpayers to make them meet these expenses for life and health insurance. If these companies take risks and spend money employing nurses to attend their policyholders they do it as a business proposition. Let them pay their own business bills.

It may well be asked plainly if maternity measures ought to be enacted while heavily financed from secret sources, which would be of great financial advantage to those who insure many of the mothers and children of the nation, and this when infant mortality has in eight years declined from 131 to 101 per 1,000 births. Is the State ready to enter upon the policy of financing maternity, by providing medical, hospital, nursing and obstetrical care to expectant mothers who desire it, perhaps whether they desire it or not? On this matter the Commonwealth is confronted with a very serious proposition.

THE FOLLOWING PROTEST FROM THE FITCHBURG DAILY SENTINEL:

MATERNITY BILL STRONGLY OPPOSED

(From Our State House Correspondent)

Proposed maternity benefit legislation is formally opposed by the Fitchburg Medical society, the Worcester North District Medical society, the Franklin District Medical society and the Bristol South District Medical society. The Massachusetts Civic Alliance has taken up the matter and is also opposing legislation.

FRIENDS OF MOVEMENT ON COMMISSION

It must be supposed that the special commission will report in favor of some sort of scheme, either the Spencer plan, so-called, which provides in substance

for maternity benefits for needy persons, though the bill is not nominally a charitable measure, or the so-called Loring Young plan which makes the benefits a health measure for the benefit of rich and poor without distinction, or a modified plan. As friends of the movement have a place on the commission, it is evident that they have the opposition at a great disadvantage. Therefore, if the people of Fitchburg, Northern Worcester and elsewhere expect to exert their due proportion of influence, it behooves them to keep watch of events and to be prepared in due season.

QUESTIONS WOMEN'S LEAGUE

The League of Women Voters, which is practically the former woman suffrage organization with change of name, but much the same personnel, is supporting maternity legislation. To them has been sent a letter by the secretary of the Civic Alliance asking if American mothers should not be praised for the very low rate of infant mortality in view of the fact that many of them are from countries where the infant mortality rate is high.

It is asked if any other country (so largely cosmopolitan) has such a low rate as the United States.

It is pointed out that the rate in Massachusetts has dropped from 131 ten years ago to 82 for the first six months of 1920, per a given number of births, which is held to be remarkable progress under present laws.

NEW ZEALAND

Regarding the low rate of New Zealand, it is suggested whether it is not due, not to state control, but to fine climate, homogeneity of the people, isolation, low general death rate and their method of caring for mothers by private means.

It is said that the special commission in this state has found that in almost every case of maternal mortality a physician was not present, though most of the persons in question were well to do. Over 99 per cent of births in Massachusetts are said to be all right and the question is whether the system now so successful should be changed because less than one per cent of the mothers are fatalistic, shiftless or improvident. A strong protest is made against the proposed legislation.

DOCTORS' PROTEST

The Civic Alliance has prepared for circulation the following extracts from a statement of the case which was made to the legislature at the last session by Dr. A. H. Quessy of Fitchburg and of the Worcester North District Medical society:

"Bills for maternity benefits come from an erroneous idea in the minds of some people, based upon questionable statistics, that the health of the American nation has gone far below the universal standard, and that prenatal and postnatal care is the panacea for all our evils. We are tired of social reforms which are constantly being foisted upon us to cure us of what ails us when nothing at all out of the ordinary is the matter. If the proponents are really in earnest in their endeavors to better the human race, the expectant

mother and offspring, we would suggest that they devote the same amount of energy in advocating more religion, better morals, better habits, better protection by right dressing, better living and working conditions, less dancing, less theaters, more fresh air, less burning of the midnight oil, and many other things too numerous to mention. The results obtained would throw into insignificance the prenatal and postnatal proposition." * * * * *

HOME RULE VS. CENTRALIZATION

It will be seen that this proposition raises in a direct form the issue of local self-government versus centralized government. Shall the local doctors continue their present relations or shall there be more centralized power in the state department of health? There is much power in the local argument. It was the sentiment appealed to in the conflict last session over the physical training bills for public schools and it was the argument which turned the scale.

There is a feeling on the part of opponents of maternity benefits that the state department of health will invade the local field too much if the bill passes, which it is expected will be reported.

In view of the short time for the special session of the legislature, since it is not to be called till Dec. 7, and the nearness of the regular session, it seems quite probable that the entire subject will be referred to the regular session, especially for the sake of establishing the principle that the bars shall not be let down at the special session for any business whatever but the revision of the statutes. Thus the workers of the Fitchburg and the North Worcester district societies will have further opportunity to organize the opposition which they are expected to lead against all maternity benefit legislation.

DOCTORS' PROTEST

MATERNITY BENEFITS NOT A PANACEA

Bills for maternity benefits come from an erroneous idea in the minds of some people, based upon questionable statistics, that the health of the American nation has gone far below the universal standard, and that prenatal and postnatal care is the sole panacea for all our evils.

We are tired of social reforms which are constantly being foisted upon us to cure us of what ails us when nothing at all out of the ordinary is the matter.

If the proponents are really in earnest in their endeavors to better the human race, the expectant mother and offspring, we would suggest that they devote the same amount of energy in advocating more religion, better morals, better habits, better protection by right dressing, better living and working conditions, less dancing, less theaters, more fresh air, less burning of the midnight oil, and many other things too numerous to mention. The results obtained would throw into insignificance the prenatal and postnatal proposition.

STATE CONTROL OF MATERNITY BENEFITS UNNECESSARY

We oppose these bills because they are unnecessary. We have at present laws upon our statute books and

what is needed is to work out these laws to their fullest extent. Then if they are not sufficient, amend them or make new laws.

The State Department of Health has never been given more than advisory power. We have no objection to have that same power continued. The force of law has always been invested in the local departments of health. That is home rule, and we trust it shall prevail.

The very things sought are now in a measure being accomplished. Physicians, under the law, report all births as they occur. The local board of health then sends a visiting nurse or the district nurse to follow up the case and help the physician to give postnatal care. This costs the State not one penny. It would be an easy matter to extend the work and make it even more effective under the same mode of procedure.

Expectant mothers engage their physicians several months in advance. The attending physicians are thereby in a position to give advice and prenatal care. Here again it would be an easy matter for the physician, in conjunction with the local board of health and the visiting nurse, to extend the work. The advisory function of the State department of health would here find a very useful and broad field of endeavor. Thus we oppose these bills because they are unnecessary, and the same results can be obtained without cost to the Commonwealth.

These extracts are from the protest of the Worcester North District Medical Society which was presented to committees of the Massachusetts Legislature of 1920 by A. H. Quessy, M. D.

HEALTH CENTERS NOT NECESSARY IN NEW YORK STATE

REPORT OF THE COMMITTEE ON COMPULSORY HEALTH
AND WORKMEN'S COMPENSATION INSURANCE OF THE
MEDICAL SOCIETY OF THE COUNTY OF NEW YORK

BY EDEN V. DELPHEY, M. D.
NEW YORK CITY

November 22, 1920.

Your Committee on Compulsory Health and Workmen's Compensation Insurance begs leave to report that during the year it has made a careful study of the subject of, and the bill presented to the Legislature on, Compulsory Health Insurance; the Workmen's Compensation Insurance in its application to the medical profession, especially that portion relating to occupational diseases, and the freedom of choice of physician by the injured person coming under the provisions of the law; and of the subject of "Health Centers."

On February 26th the chairman sent a letter to the secretaries of all the State Medical Societies in the United States endeavoring to ascertain the sentiment of the members of these various societies on the subject of compulsory health insurance; whether they had instructed their delegates to the A. M. A. on the subject; inquiring their opinion as to the best method of

bringing the matter before the A. M. A. for action thereon, and requesting a list of their delegates to the House of Delegates of the A. M. A. He sent a letter to the delegates to the Medical Society of the State of New York calling their attention to the imperative need of taking action on the subject and enclosing the substance of a resolution which he expected to introduce in the House of Delegates of our State Society indicating that it was desirable to instruct our delegates to the A. M. A. to introduce a resolution in the House of Delegates of the A. M. A. and to support the resolution in every way possible. He also sent a letter to all the delegates to the House of Delegates of the A. M. A. inviting their attention to the propaganda for a scheme which could but have a serious and destructive effect upon the most altruistic profession on the face of the earth—the medical profession—that it would tend to destroy individuality and prevent the proper class of men from entering the profession in the future whereby the entire people would suffer. He is pleased to report that resolutions against the iniquitous scheme for compulsory health insurance were unanimously adopted both by our State Society and by the House of Delegates of the A. M. A.

After a careful study of the subject and conferences with the N. Y. State Industrial Commission, the Committee formulated amendments to the Workmen's Compensation Law, as follows:

SUGGESTED AMENDMENTS TO THE WORK- MEN'S COMPENSATION LAW

SECTION 13. Treatment and care of injured employees.

The employer shall [promptly] provide for an injured employee such medical, surgical or other attendance and treatment, nurse and hospital service, medicines, crutches and apparatus as the nature of the injury may require during sixty days after the injury; but the Commission may, where the nature of the injury or the process of recovery requires a longer period of treatment, require the employer to provide the same. [If the employer fail to provide the same, the injured employee may do so at the expense of the employer. The employee shall not be entitled to recover any amount expended by him for such treatment or services unless he shall have requested the employer to furnish the same and the employer shall have refused or neglected to do so.] *An injured employee shall have the right to choose any physician duly licensed to practice medicine in this state to attend and treat him for the injury as hereinbefore provided, subject to the supervision of the Commission.* All fees and other charges for such treatment [and] *services, medicines, crutches and apparatus* shall be subject to regulation by the Commission as provided in section twenty-four of this chapter, and shall be limited to such charges as prevail in the same community for similar treatment of injured persons of a like standard of living.

Matter in brackets [] to be omitted.

Matter in *italics* is new matter.

WORKMEN'S COMPENSATION LAW

Amend Section 3, by changing sub-section 7, page 22, Edition of July, 1919, to read as follows:

"Injury" and "personal injury" mean only accidental injuries arising out of and in course of employment, [and] such diseases or infection as may naturally and unavoidably arise therefrom [.] , and such "occupational" diseases as are scheduled under Article 2a.

Matter in brackets [] to be omitted.

Matter in *italics* is new matter.

WORKMEN'S COMPENSATION LAW

Amend Section 26, by adding after the word, "therefrom," Section 26, page 57, 20th line, Edition July, 1919, the following:

Claims for medical services and for services or treatment rendered or supplies furnished pursuant to Section thirteen of this chapter and approved by the Commission in conformity with Section twenty-four hereof, shall constitute the person or persons owning such claim or claims a party in interest hereunder for the purpose of permitting the filing with the County Clerk of the decision of the State Industrial Commission as herein provided and such person shall to the extent of the amount of his claim so approved by the Commission, be deemed to have all the rights of a judgment creditor in such claim and may enforce his rights thereto with the same effect as though the judgment stood of record in his name and for his benefit.

Matter in brackets [] to be omitted.

Matter in *italics* is new matter.

The Committee is of the opinion that the Occupational Diseases Amendment to the Workmen's Compensation Law is a corollary to the law itself, and that if the medical profession were properly protected in its rights and privileges as provided for in our suggested amendments, the enactment of some such an addition to the Workmen's Compensation Law should be approved.

The Sage-Machold Health Centers Bill was thoroughly studied by your Committee, and in order that we might come to a just and proper conclusion as to its merits, we sent out circular letters to all the delegates to the State Society, outside of New York City, and to all the secretaries of the County Societies, proposing a series of questions and requesting replies thereto. The result is as follows:

TABULATION OF REPLIES IN RESPONSE TO CIRCULAR LETTER REGARDING "HEALTH CENTERS"

1. Are the people as well cared for medically in the rural as in the urban districts of the State? *Ans.*—Yes, 18; no, 20.
- 2a. Is the number of physicians greater or less in the rural districts than formerly? *Ans.*—Greater, 6; about the same, 1; less, 23.
- 2b. Do the people at large notice and complain of it? *Ans.*—Yes, 16; no, 15.
- 3a. Owing to improved transportation by automobiles, trolleys, etc., do the physicians more easily reach

the sick in the rural districts? *Ans.*—Yes, 29; in the summer, yes—in winter, no, 8.

- 3b. Do the laity more easily reach the hospitals in the larger cities? *Ans.*—Yes, 33; in summer, yes,—in winter, no, 5.
4. If the number of physicians in your county is proportionally decreased, is it
 - a. Because the rural physicians are moving to the cities and towns? *Ans.*—Yes, 15; no change in the number of physicians, 3.
 - b. Because the number of recent graduates going to country is less. *Ans.*—Yes, 23; no, 4.
 - c. Because the number of physicians in the whole United States is smaller in proportion to the number of the population than formerly? *Ans.*—Yes, 8; emphatically yes, 1; questionable, 3.
5. If there is any such change in recent years between the proportion of physicians to the population in the rural districts, how much is due to
 - a. The question of fees and sufficient compensation to permit of a proper mode of living? *Ans.*—A great deal, 14; none, 9; questionable, 4.
 - b. Imperfect laws regarding the collection of fees? *Ans.*—Yes, 7; emphatically yes, 2; questionable, 6; none, 9.
 - c. The advent of new cults? *Ans.*—Yes, 4; questionable, 2; none, 11.
5. Is the lessened ratio of physicians to the general population due to any extent to greater incentives in other callings? *Ans.*—Yes, 19; emphatically yes, 1; questionable, 2; no, 8.
- 7a. Is there a hospital in your neighborhood? *Ans.*—Yes, 31; no, 6.
- b. How many in your county? *Ans.*—In all the replies received, 97; average $2\frac{1}{2}$.
- c. Do they have the respect and confidence of all the elements of the community? *Ans.*—Yes, 28; questionable, 1.
- d. In other words, do the well-to-do and the poor patronize them? *Ans.*—Yes, 24.
- dd. Do those who can do so, go to the hospitals in the larger cities? *Ans.*—Yes, 3; sometimes, 3; no, 2.
- 8* Have you a dispensary in your neighborhood? *Ans.*—Yes, 22; no, 15.
- ** How many in your county? *Ans.*—In all the replies received, 35; average, about three-quarters of one dispensary.
 - a. Are they patronized only by the poor and needy? *Ans.*—Yes, 16; no, 4.
 - b. Are the real poor and needy crowded out by those who can well afford to pay for medical care and treatment? *Ans.*—Yes, 1; no, 16.
 - c. Do the poor as well as the well-to-do prefer to have their own physician attend and treat them for their illnesses whether they can afford to pay or not? *Ans.*—Yes, 25.
- 9a. Have you clinical laboratories in your county? *Ans.*—Yes, 22; no, 14.
- b. Are they capably and efficiently conducted? *Ans.*—Yes, 17; questionable, 2.

- c. Are they patronized only by the physicians? *Ans.*—Yes, 17; or
- cc. Are they mainly used by the commercial interests? *Ans.*—Yes, 6; no, 2.
10. What in your opinion are the conditions, professionally, economic, or relating to the public health, which make desirable such legislation as the Sage-Machold Health Centers Bill which failed of enactment last winter? If there are any other facts which you think should be placed before this committee, we shall be glad to have you write us fully regarding them. *Ans.*—In favor of Health Centers, 3; questionable, 2; no, 15; emphatically no, 4.

The Committee therefore recommends that the Society take measures to have the suggested amendments to the Workmen's Compensation Law introduced into the next session of the Legislature.

The Committee recommends that the Society take measures to oppose any and all further Health Insurance Bills.

The Committee recommends that the Society oppose the scheme for "Health Centers," as our survey indicates that it is not needed; that the people in the rural districts are, as a whole, as well cared for medically as are the people as a whole in the cities; that the general medical care is adequate now; that both the poor and the well-to-do prefer to have their own physician attend and care for them in their illnesses whether they can afford to pay for it or not; that the medical profession will in the future, as it has always done in the past, look after the poor and needy in the times of medical need and distress; and that there is no real need for a scheme which will have for its effect the production of a large number of offices to be scrambled for by both political parties with its attendant graft and neglect of those for whom the plan is supposed to provide an improved medical care.

The Committee respectfully requests that those portions of the report which refer to the amendments to the Workmen's Compensation Law, and to the "Health Centers" be postponed until the December meeting of this Society, and that they be published in the December number of the *New York State Journal of Medicine* in order that members may have the subject before them for study and consideration before being called on to decide what their action shall be.—*New York State Journal of Medicine*, December, 1920.

LOCKING THE DOOR BEFORE THE HORSE IS STOLEN, INSTEAD OF AFTERWARDS

Dr. A. F. Lent, secretary of the Professional Guild of King's County, New York, reports as follows: To the Members of the Professional Guild:

The most important part of the legislative work, in my opinion and that of the Legislative Committee, was done at the conventions at Saratoga. At one convention we assisted in having health insurance struck from the platform, although we were unable to have them strike out health centers.

Before the other convention, learning that the State Chairman had selected a committee to draft a platform to be presented to the Platform Committee at Saratoga, we arranged with a personal friend on that committee to call us up immediately after the meeting and inform us as to its decisions. Upon finding that the report contained a recommendation for health centers, we communicated with many prominent political and professional leaders in our state and finally in company with Doctor Senior, Chairman of the Legislative Committee, I went to Saratoga in a determined spirit, and with the support of a large part of the leading men of the allied professions. The result was that the platform now makes no mention of health centers.

You can readily see that had both conventions recommended health centers, all the propaganda, all the threats, and all the delegations sent to Albany, would have been of little avail, and we believe health centers as suggested last year to be as injurious to the medical profession as health insurance itself. During the session and afterwards many took sole credit for legislation which was largely defeated by our organization, but in closing may I say that the Professional Guild works on the plan of locking the door before the horse is stolen, instead of afterwards.

Respectfully,

DR. A. F. LENT.

—Bulletin of The Professional Guild of Kings County, New York.

Public Health

NATIONAL HEALTH COUNCIL ORGANIZED DR. DRAKE HONORED WITH IMPORTANT APPOINTMENTS

One of the most significant developments of recent times in public health circles is the organization of the National Health Council, consummated during the month of December in Washington, D. C. Persons long experienced in public health work look upon the creation of the National Health Council as a definite and determined effort to coordinate and harmonize the work of the numerous public health bodies in the interests of promoting public health betterment through the country.

The National Health Council is composed of representatives of each of the great national public health organizations of the United States, one representative from each body.

The officers of the National Health Council are as follows: Dr. Livingston Farrand, chairman; Dr. Lee K. Frankel, vice-chairman; Dr. C. St. Clair Drake, secretary.

In addition to the above mentioned appointments, Dr. Drake has been elected secretary-treasurer of the Conference of State and Provincial Health Authorities; member and secretary of the Executive Committee of the State Health Officers' Association and secretary of the Cooperating Committee of the American Public Health Association, the American

Medical Association and the State Health Officers' Association.

UNUSUAL PREVALENCE OF SCARLET FEVER AND DIPHTHERIA

The Division of Communicable Diseases of the State Department of Public Health reports a very serious epidemic of scarlet fever in the city of Springfield, and the prevalence of diphtheria in many sections of the state.

During the past year, diphtheria has been generally prevalent over the state, and there is an increasing number of cases at this time. The undue prevalence of diphtheria has brought about heavy demands upon the State Department of Public Health for free antitoxin.

WATER SUPPLIES FOR COMMON CARRIERS

Under an agreement with the United States Public Health Service, the State Department of Public Health exercises supervision over the drinking water supplies for all interstate common carriers and acting under its own initiative, the department carries out a similar supervision of water supplies used in intrastate service.

Society Proceedings

BOONE COUNTY

At the regular meeting of the Boone County Medical Society held in this City on December 2, the following officers were elected: president, J. E. Thiell, Belvidere; vice-president, Alden Alguire, Belvidere; secretary and treasurer, F. S. Whitman II, Belvidere; delegate, A. J. Markley, Belvidere; alternate, Wallace Belsey, Poplar Grove; censor, Clara B. McCracken, Belvidere, Ill.

COOK COUNTY

CHICAGO MEDICAL SOCIETY

Regular Meeting, December 1, 1920

1. "Perforations of the Drum-Membrane."—J. Hollinger.
2. "Compression of Chest Cavity by Multiple Rib Resection in Unilateral Tuberculosis of the Lung."—A. J. Ochsner.
General discussion.
3. "Infant Welfare in Private Practice."—Jesse R. Gerstley.
Discussion, Clifford G. Grulee and Irving F. Stein.

Regular Meeting, December 8, 1920

1. "Indirect Expulsion of the Placenta."—Joseph L. Baer.
Discussion, L. E. Frankenthal and Ralph Reis.
2. "Disorders of the Hypophysis" (Lantern Slide

Demonstration).—Wm. Engelbach, St. Louis, Mo.

Joint Meeting, Chicago Medical Society and The Radiological Society of North America, December 15, 1920

"Cases of Lesions of Bone for Diagnosis." Presentation of the X-Rays in Lantern Slides with Histories.—J. C. Bloodgood, Baltimore, Md.

Discussion: Surgical Aspect, C. C. Rogers; Pathological Aspect, Kellogg Speed; Radiotherapy Aspect, Henry Schmitz.

CHICAGO OPHTHALMOLOGICAL SOCIETY

Meeting of March 15, 1920 Cont'd.

Dr. Findlay asked what vision did the patient have after the foreign body was removed.

Dr. Goldenburg replied that he had a cataract now. Tension was normal to the fingers.

Dr. Findlay understood that in Dr. Mann's cases the piece of steel was found lying in the anterior or posterior chamber. Dr. Mann said in the anterior chamber.

Dr. Findlay said that in his case the piece of steel was in the vitreous and was there for at least two years. The lens became quite cataractous, and whether he would be able to get it from its locality he did not know. It must lie behind the equator. It was situated deeply. To remove a piece of steel from the vitreous chamber after it had been so long in there was difficult, because there was more or less disorganization afterward and the prognosis of the case was not so favorable.

OPTICAL IRIDECTOMIES

Dr. Robert Von Der Heydt presented a boy, seven years of age, in whom he did bilateral optical iridectomies. Now the boy had vision of 20/50 in each eye. There were central cataracts. By that he meant a cataract which was much smaller than the so-called parinuclear or zonular cataract. This cataract was circumscribed and involved a small central area in the embryonic nucleus, which latter consisted of two places in front, one posterior and usually a clear area in the middle of the lens nucleus. All who had seen this case would agree that in a small central cataract such as this, iridectomy was indicated rather than needling.

DISCUSSION.

Dr. Harry Woodruff said that many operators would have done the same as Dr. Von der Heydt did in this case. He remembered seeing a case of Dr. Beard's many years after he had done optical iridectomy. The man had gone on for years and add eventually developed cataracts. His vision had finally deteriorated on account of extension of the lens opacities, so that eventually he had had to have cataract extraction.

If this case which Dr. Von der Heydt had reported had been his, he would have advised a needling operation because after a successful needling the patient would have a clear round pupil which one could not obtain if one did zonular extraction, and, therefore, the chances of getting better vision than 20/50 would be very good.

Dr. Von der Heydt said that if he had a patient with a lamellar cataract and he had 20/70 vision he left him alone. Why should a needling operation have been done in this case? The patient was only 7 years of age. He was a little below the normal in mentality, therefore, he could not accurately measure his visual acuity at this time. This cataract would not progress. It was circumscribed and fixed. If in

the future he thought needling might be required he would then do it. He would keep the boy under observation. He thought a great improvement had been made in his case by the optical iridectomies.

THE CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY

The regular monthly meeting of the Chicago Laryngological and Otolological Society was held on Monday evening, April 5, 1920, at the Palmer House.

The President, Dr. Alfred Lewy, presiding.

PRESENTATION OF CASES

Dr. J. Holinger presented a nurse who had suffered from suppurative otitis with swelling and tenderness over the mastoid and brain symptoms for several weeks. She heard only loud conversation in the right ear. After the mastoid was opened improvement for some time was noticed but all symptoms, especially the unbearable backache, became worse. Past-pointing. Lumbar puncture showed fluid under increased pressure, turbid and full of streptococci. After an improvement of several days, all symptoms reappeared and especially the backache was severe. The wound looked well. With the intention of draining some of the cerebro-spinal fluid and at the same time looking for a possible brain abscess, the wound was enlarged and the dura over the cerebellum and over the temporal lobe were incised. Several stabs in the cerebellum and the temporal lobe showed no pus. The result was temporary. To relieve the backache, $\frac{1}{4}$ grain of morphine was ordered every two hours by the interne, without result. It was discontinued and 15 grains of aspirin every evening seemed to have a very beneficial influence. The unusual features of the case were:

1. *In the presence of symptoms of meningitis like slow cerebration, Babinski's and Kernig's signs and impossibility of approaching the chin to the sternum, the patient was able without pain to turn the head from side to side. Headache and sleeplessness were absent during the whole duration.*

2. *The diagnosis of meningitis was made certain by the finding of turbid cerebrospinal fluid under high pressure, containing many streptococci. This usually makes the prognosis fatal.*

3. *The decided turn for the better came with the medication of aspirin.*

The second patient was a man of thirty-six who came on account of loss of hearing in his right ear since last summer. He was treated in 1906 by Dr. Hardie for humming in the ear. After removal of adenoids and a few inflations he was cured in the summer of 1919. He never had humming of ears or pain. At the end of January 1920 Dr. Holinger found on the roof of the external canal crusts which were removed with difficulty. A large marginal perforation in the drum membrane was seen and some granulations on the roof of the canal. In the course of about six weeks two pieces of cholesteatomatous masses, the size of a pea, forced their way through

the perforation in the canal and through the granulations. At the time of presentation a third piece, a white mass between the red crown of granulations, was working its way into the external canal.

DISCUSSION.

Dr. Robert Sonnenschein thought the first case was probably one of streptococcal meningitis. That these may recover at times was shown in a case reported by Dr. Weaver about a year ago. Dr. Sonnenschein saw this patient during Dr. Friedberg's absence on military duty. The patient was a nurse who contracted the disease while on duty in the hospital. All the typical signs of meningitis were present, but there was no involvement of the nose, ear or throat. Several spinal punctures were made and the antistreptococcal serum injected. The patient made a complete recovery after three or four weeks.

Dr. Harry Kahn said he had seen the side to side movement of the head in meningitis in a case under his care.

Dr. Norval Pierce said it was very unusual for a case of meningitis to recover when viable microbes were recovered from the cerebrospinal fluid. None of his cases had recovered, and he wished to know whether the micro-organisms were viable. The fact that there was no headache was difficult to explain, especially as the spinal fluid seemed to be under pressure. Headaches were caused by increase in the cerebrospinal fluid and not by inflammations *per se*. Dr. Pierce thought one should be careful in giving even a hopeful prognosis in a case of meningitis where viable organisms had been recovered. It must also be remembered that accidental contamination occurred in these cases from the skin, and, therefore, the technic in the spinal puncture and examination of the fluid should be very exact and very thorough. Much depended upon the fact as to whether *viable* micro-organisms were recovered. In his opinion Dr. Holinger's case was not a general, spreading, suppurative meningitis, but in all probability a localized meningitis. How the viable micro-organisms got down into the lower portion of the spinal canal it was difficult to say.

Dr. S. A. Friedberg thought that much depended upon the virulence of the microorganisms. It is well known in sinus thrombosis, for instance, that the findings of hemolytic streptococci in the blood cultures, does not necessarily imply an unfavorable prognosis. Several cases that had come under his observation have recovered. Virulence tests on guinea pigs were negative. By analogy, it is possible that we may also have bacilli of low virulence in the spinal fluid.

Dr. Holinger (closing) stated that the cerebrospinal fluid was reported to be swarming with streptococci, not one here and there as was often the case. The pathological findings in the laboratories of the Cook County Hospital are pretty reliable. Dr. Holinger was glad to hear that the peculiarity of free movement of the head from side to side in the presence of absolute impossibility of movement of the head forward, was noticed elsewhere, as Dr. Kahn mentioned. He wished to know whether this is in connection with the favorable termination of the case; in other words, whether this peculiarity is of prognostic value.

Dr. Stanton A. Friedberg read a paper on "The Carrier as a Factor in the Control of Diphtheria."

DISCUSSION

Dr. W. W. Hamburger (by invitation) said that he was quite at a loss to discuss Dr. Friedberg's paper on diphtheria because his experience was confined almost entirely to the streptococcus. During his military service he worked during the period of eleven months on the streptococcus carriers, particularly in measles. They had isolated the carriers from the non-carriers and studied the effect on the carriers throughout the camp. In the early winter of 1917-18 when the measles came in to Camp Taylor all the men were very carefully examined. The measles cases entering the Base Hospital through the receiving ward were swabbed by the nose and throat surgeon and examined for streptococci, blood agar plates made, and the cases labeled either as carriers

or non-carriers. At the end of twenty-four hours they were sent either to the measles carrier ward or to the non-carrier ward, so at the end of every twenty-four hours the receiving ward was emptied for new cases coming in that day. During the period in the observation ward the cases were carefully cubed, the attendants carefully masked, and all measures of quarantine were used that could be carried out. The study resolved itself into a study of the complications arising in the carrier and non-carrier wards. The cases coming in during the height of the epidemic showed that seventy-seven out of one hundred carried streptococcus in the pharynx. As to complications, about 30 per cent. developed in the 500 cases so studied. Of this 30 per cent. 6 per cent. developed in the non-carrier wards, and 24 per cent. in the carrier wards. The complications were the usual complications of measles, otitis media, acute sinusitis, acute bronchopneumonia, severe bronchitis, erysipelas in some cases, etc. The study covered a period of about two months and they concluded that the segregation of measles patients into carrier and non-carrier wards was advantageous, resulting in a decrease of complications, for they proved that it cut down the percentage from 30 per cent. in the carrier wards to 6 per cent. in the non-carrier wards.

Later experiments showed that some of the complications were mixed infections. While it was found that complications could be diminished by carrier segregation the quarantine with masks and cubicles was not perfect.

This work was carried further by immediately swabbing the new recruits as they came off the train in camp. Upon entrance into camp about 15 per cent. were shown to be carriers. At the end of six months this had been increased to 83 per cent., showing that the carrier state, at least in this study, had developed from contact with their fellows, and that finally the camp became heavily seeded with streptococcus. Another interesting thing was the variation in carrier per cent in epidemic and non-epidemic periods. In non-epidemic periods only about 6 per cent. were carriers while 35 per cent was found during the period of epidemics.

During the height of the epidemic Dr. Hamburger visited Camp Grant and saw Dr. Capps and his method of masking which was in use there, and as soon as he got back to Camp Taylor he instituted the same method. While he felt that a step in advance had been made, the masking was not 100 per cent. efficient. It seemed that the only way a separate non-carrier study could be made was that the ward itself should be maintained as a clean ward throughout, with all the unclean or carrier cases put into carrier wards.

As to the question of the meningococcus carrier, the feeling at Great Lakes was that their carrier was not of importance in the meningitis; while at Camp Taylor they searched for these carriers and kept down their meningitis pretty well, still they did not think that the carrier was much of a factor in the spread of meningitis.

Another interesting angle of their work which checked up with Dr. Friedberg's was the question of how long the carrier state is maintained after an acute illness. They swabbed all the convalescent measles cases on discharge from the hospital, finding about 72 per cent. carriers after recovery from their measles, in spite of all local treatment. A certain group of the 72 per cent. convalescent carriers was put out on porches, with abundant fresh air and sunshine and ample food and some exercise, and within forty-eight hours the carriers dropped from 72 to 40 per cent. Following this they gave up all local measures and kept the patients for a week under conditions of fresh air, sunshine and good food, and the percentage of carriers dropped promptly.

Tests had demonstrated that in the parts of the camp where measles was prevalent the dust of the barracks showed a high percentage of streptococcus, while in the non-carrier wards the percentage was very low.

Capt Kleinman (Fort Sheridan, Ill.) said that he had charge of a group of diphtheria carriers in November. Ten cases in all were cultured, both nose and throat, for the first time, and out of that group two were found to be ethmoid carriers and they had been longest in the hospital. The study was continued until after the first of the year and out of the seventeen cases about 35 per cent. were found to be ethmoid

carriers. Since that time all of the cases have been cultured, both nose and throat, and the treatment with argyrol tampons, as outlined by Hazeltine, had been carried out. In this way the time lost in hospitals had been cut down. The ethmoid group averaged thirty-three days and the non-ethmoid about thirteen days. The treatment consisted of quarantine, masking when out of their ward, applications to the nose and throat and gargles. Cultures are made Mondays, Wednesdays and Fridays and three consecutive negatives from both throat and ethmoid region are required for release. Tonsillectomy has not been done.

Major W. F. Von Zelinski thought the carrier question was a colossal one and could be discussed indefinitely. He had seen a good deal of it in regard to measles, meningitis and diphtheria but had been unable to form any conclusions. He had listened to a very exhaustive paper by Dr. Davis at a recent meeting of the Society and left with the conclusion that everybody had organisms in their throat all the time of one kind or another. The question of testing them out for virulence was a question of testing out immunity; on one person organisms might be very virulent and in another person not so virulent. They seemingly became more virulent by passing through a number of people, and also seem to lose their virulence in time.

During the last few weeks at Fort Sheridan the carrier patients (diphtheria) had been confined under treatment for thirty to thirty-three days. Recently no local treatment of any sort had been used for they had found that on a simple gargle they became free from organisms as quickly as with the local applications used before. They had experimented with injection of the Schick serum and found that some of the men who had been free of the organisms for a number of days gave a positive reaction and some who still had them gave a negative.

Major Von Zelinski was stationed at Camp Wheeler, Ga., from December, 1917, until April, 1918, and in the epidemic of meningitis in that camp there were no active cases in his regiment. The central inspectors came over to his infirmary with the dichloran T spray and he was instructed to spray certain men. They took some cultures at different places and if a carrier was found they swabbed all the men in that tent and then went into the next, gradually widening the circle as carriers were found. This was ineffective treatment because it was impossible to reach all the places where the germs might locate. At that time the troops were receiving instruction in the use of gas masks and they allowed the men to pass through benzolchloride for about thirty seconds. Major Von Zelinski thought this might be an effective antiseptic that must certainly reach all the areas in the nose and throat, and that it might be a good idea to pass all the men through the gas house. The Chief Surgeon was against it, but he put the matter up to the commanding officer who was enthusiastic about it. A bunch of men were taken up and swabbed before they went in and swabbed when they came out and it was found that after this experience they were free of everything except the micrococcus catarrhalis. They then used this treatment on the carriers and found it reduced the period of isolation for fifteen days. They tried it on the pneumococcus and they remained away for two days.

Dr. S. A. Friedberg (closing) said that an underlying pathological condition must be present in order to establish or maintain the carrier condition. In the presence of epidemics in organizations or closely associated groups, the bacilli may also be found in normal conditions of the nose and throat; however, their presence is usually of a transient nature and they are easily gotten rid of.

In answer to the question as to immunity to diphtheria in children after the removal of tonsils and adenoids, the speaker did not believe any was conferred. The susceptibility of infection, in the absence of suitable lodging places for the growth of the bacilli, was materially lessened.

Dr. Hamburger had mentioned that they had taken air cultures in order to determine various sources of dissemination. In Dr. Friedberg's work, the cultures were made in every possible manner and from every suspected source including air, gas masks, kitchen utensils, etc. From the results, it was impossible to draw any definite conclusions.

Very evident factors in the spread of disease were found in the main mess halls, large out-patient departments, and carelessness or ignorance as to necessary precautions to be carried out.

From what one of the speakers had said, there seemed to be a little uncertainty in regard to virulency and avirulency of the microorganisms. It is a well established fact that a virulent bacillus does not lose its virulency, nor is it possible for an avirulent bacillus to become virulent. The virulency of the bacillus is determined by guinea pig inoculation and not by the fact that a person may contract a severe clinical case by having been exposed to a patient only slightly ill from the disease.

Dr. J. Holinger read a paper on "Tonsillectomy in the Presence of a Peritonsillar Abscess."

(Abstract).

The removal of the tonsils in the presence of a peritonsillar abscess is a procedure which as yet has undeservingly not many friends. Still it is certainly a logical operation, as the tonsils are the center of the trouble, and sooner or later have to come out because peritonsillar abscesses often recur. The objections are more in the nature of prejudice which is not born out by experience. The recovery after the removal is rapid. It does not take any longer than after an ordinary tonsillectomy.

The operation is more difficult than an ordinary simple tonsillectomy and the general anesthesia has to be given by an experienced anesthetist. The hemorrhage is usually more severe, but can be controlled by the usual methods. The anatomical conditions are more complicated on account of displacements by the abscess which may develop above or behind or directly lateral of the tonsil, or in the tonsil itself, thus dividing the tonsil in several pieces. The method of removal is by means of forceps, sickle-knife and snare. Septic symptoms which are often present in cases of peritonsillar abscess usually disappear in the first twenty-four hours, and albumin in the urine within the first two or three days.

DISCUSSION.

Dr. Louis Ostrom (Rock Island) said that eight years ago he started work of this kind and he had never seen a case that had not had just as good, if not a better, convalescence as a normal tonsillectomy. Every patient made a wonderful recovery (perhaps good luck), while at the same time all kinds of complications followed tonsillectomies in normal cases (perhaps bad luck). If the patient had double quinsy he operated just the same. His experience with anesthesia had been entirely local (1/10 to 1/5 per cent. cocaine with adrenalin) except in children. He had had no trouble with this and saw no reason why one could not obtain perfect anesthesia. From the time the quinsy first appeared to periods ranging from a few weeks to several months he had had no difficulty in securing complete anesthesia. In many cases the pillars had been a solid mass of scar tissue and the abscess had burrowed outside the constrictor muscles, exposing the large vessels. In only one of those cases he had some hemorrhage that was troublesome. In this case he had used a piece of gauze, taking a stitch on the side of the posterior pharynx and away forward on the side of the jaw to hold it in place. In this instance the result was good. The records at the eye, ear, nose and throat hospital at Colbenz will show that the novocain collapse was just as frequent as from cocaine. He made the first injection to the side of the uvula, going up and trying to follow up to the hard palate, down to the base of the anterior pillar, then behind, and infiltrating between these three points. In the peritonsillar abscess the constrictor is nearly always laid

bare by the abscess itself. No anesthesia is needed through the capsules at this locality. In no instance had any of his patients complained of pain. The cases thus operated would probably reach 200 or 250, and in all the anesthesia was entirely successful. Using a large quantity of the anesthetic had no bad effect so far as healing was concerned.

Major W. F. Von Zelinski said that in one case like this which had been operated under local anesthesia, in which there was nothing particularly difficult about the anesthesia, the patient afterward developed pneumonia, which he attributed to the aspiration of some pus. He had had two cases, and thought there were two points to consider: one, the hemorrhage was very severe, and the other was the danger of pneumonia. He did not care to take out any more tonsils when there was any paratonsillar abscess, but thought it much simpler to drain the abscess first and believed the chance for complications was less when this was done. He thought even Dr. Holinger would not deny that he was taking a chance of having some of the pus escape and set up a secondary infection in the lung.

Dr. Norval H. Pierce thought that this was such an unsurgical proposition that he must say something on the subject. Why a complete local anesthesia should be obtained in this region in the presence of inflammatory action when one was unable to obtain anesthesia in other parts of the body under the same conditions, was very hard to understand. He had had some difficulty in producing local anesthesia even in cases where the peritonsillar abscess had been evacuated and some time had elapsed because of the scar tissue that is produced. The excision of such tonsils is likely to be painful, although he thought he injected as deeply as the previous speakers. Surely one could not get local anesthesia to any great degree in inflammatory conditions, as was proven in the local anesthesia of the mastoid. One might as well not use any anesthesia where infiltration of the mastoid region had occurred or where there was a subperiosteal abscess. Dr. Pierce could see no advantage in this method of operating and Dr. Holinger in his paper provided enough argument against it to discredit the operation. Dr. Holinger had stated that he was limited to a general anesthetic, which in this condition is the most dangerous anesthetic; he stated that the pus gushed out from various pockets and he believed this was a great menace under general anesthesia, inasmuch as it was likely to get down into the bronchial tubes and produce pneumonia. He said the hemorrhage was much greater, and this agent was against the operation; his operation was ineffectual, inasmuch as he discovered that he had not completely removed the tonsillar tissue; these facts were enough to discredit the operation. It was more dangerous, more difficult, less complete and nothing was gained by it. Dr. Pierce thought it was better practice to evacuate the abscess, which was not difficult, and allow a certain time to intervene before performing the tonsillectomy, when it could be done under local anesthesia without the dangers incurred in this procedure.

Dr. T. W. Lewis said that he had taken out the tonsil in the presence of an abscess repeatedly, but did not do it as a routine. He was rather inclined to agree with Dr. Pierce that the operation was not in accord with strict surgical principles.

As for the anesthesia, it seemed to him that in the presence of an abscess in this location a general anesthetic was absolutely contraindicated. Sometimes the pus was under such pressure and was present in such large quantity that the whole throat filled at once and under a general anesthetic some of the pus was almost certain to be aspirated. It was not always possible to have an aspirator in position at the time the pus began to flow or to remove it at the desired time. He was still in doubt as to whether it was advisable in all cases to remove the tonsil under such conditions. In operating on a peritonsillar abscess he always endeavored to dissect the tonsil from its bed rather than attack the abscess through the pillar.

Dr. J. Lifeschutz thought it was interesting to note the different attitudes of surgeons towards two similar conditions. Most surgeons think that the tonsils should not be removed in the presence of a peritonsillar abscess, and yet in cases

of panophthalmitis, hardly anyone would advise incision of the eye with drainage, following it later with enucleation of the eyeball. Personally, he would not care to remove the tonsils in the presence of a peritonsillar abscess yet he wondered why the same did not hold true in panophthalmitis.

Dr. Norval H. Pierce said that it was very difficult to aspirate pus into the bronchi from the eye, and the control of hemorrhage in the eye socket was very much easier than control of tonsillar hemorrhage, so the conditions were entirely of tonsillar hemorrhage, so the conditions were entirely different. The dangers of a general anesthesia did not enter into the operation for panophthalmia as they did in the operations on the throat, which made removal of the eye a very much simpler procedure.

Dr. J. Holinger thought it was a matter of individual opinion whether an operation of removing the tonsil in the presence of an abscess of which it is evidently the cause was considered surgical or non-surgical. If one could show that after the incision of the abscess a second operation of removing the tonsil was avoided by this method, and that the experience of two men during a number of years had not produced any of the bad consequences that were supposed to be due to that special procedure, he felt that it should not be condemned. Neither Dr. Ostrom nor Dr. Holinger observed abscesses of the lungs or any cases of pneumonia following these operations, possibly because of good luck. The extirpation of the tonsil in the presence of an abscess is usually much easier than later on. Everyone knew how difficult it was to dissect out a tonsil where there had been several peritonsillar abscesses in the course of preceding years. Large masses of scar tissue were found radiating in all directions and all the tissues were much tougher so that it was practically impossible to pull the tonsil out of the niche in order to dissect it. The period of recovery, too, is much shorter in the first instance. Some cases of peritonsillar abscesses lasted six weeks and even three months, but with his procedure the patient was well within a week. He doubted if one was justified in calling such a procedure

tumor originating in the antrum, filling the entire side of the nose and extending out into the cheek, which had been growing for ten years. The patient had received five doses of radium in the past month, with considerable reduction of the growth. The size of the tumor and the history were unusual. The growth was a fibroma probably of the mixed tumor type, but the pathological report had not yet been received. Radiograms showed destruction of practically all of the teeth in the right upper jaw. The tumor was about the consistency of an overripe orange. The Wassermann reaction was negative and there was no history of syphilitic infection.

Dr. Hayden also presented a patient whom he had operated for a saddle nose, which resulted from trauma from a horse kick a year and a half previously, and showed photograph of the patient before operation. A strip of cartilage one and one-fourth inches long had been taken from the nose of another patient, who was having a submucous operation done at the same time. Careful tests (blood-Wassermann) showed conditions to be favorable for the use of the cartilage. The operation was performed under local anesthesia, 1/10 of 1 per cent cocaine being used subcutaneously. The incision was made well above the muco-cutaneous junction. The periosteum and skin were freely elevated with an ordinary straight submucous elevator. Two implants were made, a long one of cartilage and a shorter one of bone, the bone being placed below. The cosmetic result was excellent.

SCIENTIFIC PROGRAM

Dr. Lewis Fisher, Philadelphia, addressed the Society on "The Whys and Wherefores of a Vestibular Examination."

Dr. Fisher thought the time had passed when it was necessary to do any preaching about the value of an examination of the entire inner ear. It is pretty well admitted that a complete ear examination is very useful in many ways. He presented three case histories and used them as a text for his remarks.

(Dr. Fisher then gave a lantern slide demonstration of charts and photographs.)

These presented a schematic outline of the nerve-pathways in relation with the inner ear, as far as known to date. Taking up the three case histories in detail he pointed out the abnormal or absent reactions found on examination of these patients. With the conception of the nerve pathways of the vestibular apparatus as demonstrated on the schematic charts, these abnormal responses suggested certain locations of the lesions in these cases. Subsequent autopsies verified these suggestions.)

DISCUSSION

Dr. Thor Rothstein said he was familiar with Dr. Fisher's work and the published work in connection with Jones and that book is so lucid and clear that anyone who reads it must do so with awakened interest in all the diseases of the internal ear. It was, of course, necessary that much work must be done and the testing of the internal ear and the whole apparatus could not very well be done by anyone except an otologist, because it is necessary to have great experience to be able to judge of the results. For that reason there should be

THE CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY

The regular monthly meeting of the Chicago Laryngological and Otological Society was held on Monday evening, May 3, 1920, at the Palmer House, at eight o'clock.

The president, Dr. Alfred Lewy, in the chair.

PRESENTATION OF CASES

Dr. J. Holinger reported on the case shown at the April meeting. After showing the patient in the meeting of April the masses were removed and the perforations in the membrane and in the roof of the canal closed temporarily. About three weeks later it opened again and through the roof of the canal a fourth lump of cholesteatomatous matter was discharged, which was offered for inspection. The opening at this time was closed except in two or three moist spots. The patient's hearing was improved and he felt much better.

The discharge of cholesteatomatous globules was described more than twenty-five years ago, but that in the course of three months four masses of the size of a pea should be discharged was unusual. Furthermore, that the opening in the membrane and in the roof of the external canal closed teaches *that we may have an accumulation of cholesteatomatous masses in the middle-ear and antrum in the presence of a practically normal membrane and canal.*

Dr. Austin A. Hayden showed a patient with a

close cooperation between the otologist and the neurologist in these cases. Dr. Fisher had very clearly pointed out the difficulties. Dr. Rothstein had observed many of these difficulties and thought there was always room for doubt as to whether it was possible to draw certain conclusions from an examination. For instance, in cases where there are severe attacks of vertigo in migraine, and also in cases where the vertigo is not so violent but remains for a longer time, there may be spontaneous past-pointing and absence of the turning past-pointing. Although the past-pointing is very frequent in these cases it is irregular and limited many times to jerkiness, and he wished Dr. Fisher would explain this. There were also other points for the man who is not very well versed in this examination. For instance, in the cases where there are ataxias; in these cases there may be the phenomenon of past-pointing, but in the few Dr. Rothstein had seen it had often been irregular and might be the cause of mistakes. In an individual that has been considered apparently normal, in whom it has been impossible to demonstrate any kind of disease, the accuracy with which the tests are made is not very good, not even in those who have lost past-pointing.

Dr. Hugh T. Patrick said the thing that pleased him most of all in Dr. Fisher's presentation was his extreme modesty, and the very small claims he made for the value of the examinations. He thought that in the past the value of the tests frequently had been over-estimated. These examinations should be made with extreme care and exactitude and he believed that no man should allow himself to draw conclusions unless he had done enough of the work to be a real examiner and not a pseudo.

Dr. Patrick had an impression that a good many of the conclusions where the lesions involved the central nervous system have been based on tumor cases. Intracranial tumor cases are the worst cases in the world as a basis for refined localization. They have symptoms due to increase of intracranial pressure and to the peculiar way in which this pressure is exerted. This accounts for some of the symptoms at a distance. They are poorly adapted for localization of function, identification of paths or anything of that sort. Dr. Patrick thought the thing that was needed was a series of thrombotic cases carefully worked out. Such a series carefully observed clinically and then carefully worked out anatomically would be a reasonable basis for anatomical and physiological conclusions.

Dr. J. Gordon Wilson said the School of Pennsylvania had focused the attention of neurologists on the possibilities that can come from a careful investigation of reactions from the ear. They have shown admirable team work in their clinical studies and to these have been added in many cases the pathological postmortem examinations. While one can have nothing but praise for such careful reports, one may well be excused from hastily accepting some of the deductions based on them.

There are some generally accepted principles which are of aid in interpreting vestibular reactions:

(1) If labyrinthine stimulation produce deviation but no nystagmus then there is a lesion of the cerebral hemisphere near the posterior end of the temporal lobe on the side of the slow deviation. This was shown experimentally by Dr. Pike and Dr. Wilson and reported in a contribution to the International Congress of Medicine in 1913, and has been confirmed by clinical cases with postmortem findings, one of which was reported by Dr. Fisher in his address.

(2) Nystagmus, vertigo and pointing produced by labyrinth stimulation are exaggerated in cerebral disease, probably due to loss of the controlling influence of the cerebral cortex. Here we have possibly the explanation of their exaggeration in neurasthenia.

To these the speaker added two other points which can be easily tested and which deserve consideration—(a) The threshold for nystagmus lies below that of vertigo, i. e., the motor reaction comes first. (b) The interpretation of a perverted eye reaction, for example, rotatory nystagmus following stimulation of the horizontal canal, must be interpreted with caution for the following among other reasons:

(1) When nystagmus in animals deprived of one labyrinth is fading away the horizontal frequently gives place to a rotatory.

(2) On stimulating the labyrinth with an electric current of energy far below that producing typical nystagmus a rotatory movement is first produced.

Too much stress is apt to be laid on pointing errors. They are frequently irregular and an average of repeated examinations are required to arrive at accurate data. As a general rule we may recognize that deviation of the arm is normally produced by rotation. Dr. Wilson urged that we do not lay undue stress on a diminution and be careful in our interpretation of its absence. Further, he believed it a mistake to lay too much stress on the degree of post-rotatory vertigo or even of its absence. Mygind found that in a series of normal individuals examined only 34 per cent had post-rotatory vertigo and some of these only after repeated rotations.

In regard to the separation of the fibres from the horizontal and superior canals in the pons and medulla, we must recognize that Dr. Fisher claims only the possibility of such, supported by clinical observation and postmortem examinations. One may hope to have supporting microscopic findings. Dr. Fisher recognizes that so far no experimental or anatomical findings support this hypothesis, and readily acknowledged that it is not satisfactory to rest such an important point on variations or alterations or pressure in the brain. So far Dr. Wilson's results have been negative. Recently he had an opportunity to examine a case of probable interference with the circulation in the posterior inferior cerebellar artery such as Dr. Fisher had quoted. In this case the area involved was evidently smaller than in his. There was evidence of interference with the vestibular mechanism on the side of the lesion. There was absence of pointing error in caloric stimulation from both sets of canals on the side of the lesion, and while on rotation pointing irregularities following stimulation of the horizontal and of the perpendicular canals were present these were too irregular to support any deductions with regard to separation of fibres. But it should be recognized that one positive finding is worth a dozen negative.

Dr. George W. Hall was interested in the case referred to by Dr. Wilson. In the last issue of the Journal of the American Medical Association he reported a case of occlusion of the posterior inferior cerebellar artery, in which the vestibular findings were worked out by Dr. Brawley. The trouble with the posterior cerebellar artery occlusion is that the symptoms are not the same in all the cases. In some cases the lesion may be sufficient to produce pressure on the opposite side of the brain-stem, as had happened in this case. The lesion was on the right side but the man had disturbance on the left side of the brain-stem as well, although it was slight. In the case referred to by Dr. Wilson the findings were very much more limited and he believed they were more accurate than in the other case. So far as he could find out, Dr. Fisher's report on involvement of the cerebellar artery was the first on record in which the vestibular findings were recorded and the case they were working on was the third in which the ear findings had been worked out with any degree of accuracy as a result of occlusion of the posterior cerebellar artery. That is the region which involves as a constant symptom the sensory portion of the fifth nerve. In every case he had been able to find in the literature up to that time, the fifth nerve was involved as the only constant symptom, but there might be other symptoms of involvement. In this case the localization was so limited that the only symptoms he had to go by were the anesthesia of the right side of the face and of the tongue, supplied by the sensory portion of the fifth. In addition to that the man complained of dizziness; he had a constant tendency to walk to the right and vertigo when he arose to an upright position. The examination was not quite finished but so far as Dr. Hall could see the lesion was so extremely localized that the report should be of value as an addition to this line of work.

Dr. I. Leon Meyers understood Dr. Fisher to distinguish two sets of fibers, one for vertigo and one for nystagmus. It might be well to consider in this connection, that vertigo, as well as its related phenomena, namely, forced movements, conjugate deviation of the head and eyes, and nystagmus are in reality different manifestations of one and the same disturbance and are unquestionably due to an affection of one

and the same set of fibres. What happens is that the patient, as a result of a disturbance in the vestibular system, becomes conscious of moving in a certain direction, e. g., to the right. He may then look to the right by turning his eyes in that direction, thus forming the slow component of nystagmus, or he may look to the right by turning his head as well as his eyes, exhibiting a conjugate deviation of the head and eyes, and in case the disturbance is very profound he may even fall to the right. Vertigo is a minor manifestation of this disturbance. It is merely the sensation of the motor phenomena which exhibit themselves in the nystagmus and its allied symptoms. This sensation may exhibit itself subjectively or objectively, the patient experiencing the sensation of himself moving, or of the objects around him moving.

Dr. Fisher was in accord with the findings of Dr. Wilson regarding the production of the quick component of nystagmus. Dr. Meyers witnessed some experiments at the University of Chicago in which the quick component was observed in rabbits after the entire cerebrum had been removed. Dr. Ivy performed these experiments. From personal observation, having performed a large number of cerebellar operations on animals, he was convinced that nystagmus is not cerebellar in origin. He had succeeded in removing the entire cerebellum without producing nystagmus. Berany's past-pointing tests in cerebellar disease he had performed a good many times, but was not able to speak as to their value at the present time.

Dr. Austin A. Hayden stated that he had had the pleasure of taking Dr. Fisher's course at the University of Pennsylvania. He wished to make a special plea to the profession, and especially to the internists, neurologists and eye, ear, nose and throat men, that they routinely submit more material for neuro-otologic examination and investigation, following the exact plan worked out by Jones and Fisher. This received wide and just popularity in the Ear, Nose and Throat Sections of the various physical examination units of the Aviation Section of the Signal Corps during the late war. The need of a standardized technic—universally recognized and adopted by all men doing this work—was clearly apparent in the statistics quoted by Dr. Gordon Wilson. If this were in use, it would hardly be possible for 24 per cent of any considerable series of cases to show no vertigo.

In the series of 3,748 and over which he reported in detail June, 1919 (*Annals of Oto., Rhin. and Lar.*), the percentages were as follows:

Nystagmus—After rotation to the right there was an aggregate of 82,231 seconds, or an average of 21.9 seconds each. After rotation to the left there was an aggregate of 82,373 seconds, or an average of 21.9 seconds each.

Past-pointing—After rotation to the right, the right arm past-pointed 7,201 times, averaging 1.89 times each, and the left arm past-pointed 6,663 times, making an average of 1.77 times each. After rotation to the left, the right arm past-pointed 8,029 times, giving an average of 2.14 times each, and the left arm past-pointed 7,083 times, averaging 1.88 times each.

Of the 3,748 applicants only 142 were rejected for abnormalities of the kinetic-static sense—a little less than 5 per cent: of these 110 failed in past-pointing, 17 in nystagmus, and 7 in falling; 22 men were nauseated and 31 vomited. Disqualification on account of freak causes numbered only 692 or 18.4 per cent.

It was a great source of regret to the men who were doing this work, to Dr. Pierce first of all, and to himself and Dr. Lewy later on that they were unable to submit all of the rejected men to the caloric tests. The individual findings of the semicircular canal or central nervous system would doubtless have been most interesting to work out.

Dr. Norval H. Pierce thought he voiced the sentiments of nearly everyone as to the great practical value in our every day work of the knowledge already at our disposal regarding the vestibular apparatus. Owing to the very complicated anatomical factors it would take years before it would be possible to finally place the action of the end organs on a sound foundation. The anatomical space involved in the nerve paths and ganglia is so limited and the centers and tracts so numerous that it is going to be very difficult to differentiate in many cases. For example, the inhibiting mechanism of

the vestibular action is not understood. In examining the aviators they saw several cases where profound nystagmus was produced by rotation and the individuals vomited. The very moment the vomiting occurred the nystagmus ceased. Therefore, there is an inhibiting mechanism in this region which inhibits nystagmus notwithstanding the fact that the lymph is still exerting its action on the end organ. He did not believe this was due to pressure within the endolymph, and secondarily on the perilymph induced by increased abdominal pressure in the act of vomiting. This increases the pressure in the cerebrospinal fluid, it is true, but he had gone over some experiments to eliminate this as a cause of inhibition of nystagmus. It will take a long time and a great many autopsies on cases which have been carefully and accurately studied clinically before the many problems are solved. Still, no one can question the great practical value of functional tests of the static apparatus in our every day clinical work.

Dr. Alfred Lewy said that Dr. Fisher made a reference to a partial paralysis of the soft palate in its failure to lift at its base. Dr. Lewy had seen two instances of this kind in lesions that were supposed to involve the glosso-pharyngeal nerve. Instead of drawing up quickly the mucous membrane of the posterior wall of the pharynx seemed to draw over to the side, much as the face does in facial paralysis. He asked if Dr. Fisher had ever noticed this condition in angle tumors, especially those that extend down and involve the foramen.

Dr. Lewis Fisher (closing) said that unfortunately there has been a tendency in the last few years to refer to a large phase of this work by the simple term of "Past-pointing." One is continually asked "Have you done the past-pointing tests; did the patient show past-pointing or did he not show past-pointing?" This attempt to sum up so comprehensive an examination in so short a phrase is probably due to a haziness of conception of the subject. Any attempt to sum up a vestibular examination in any such manner is like attempting to sum up a neurologic examination in the simple term of "knee-jerk." The pointing tests *per se*, as a matter of fact, do not mean so much. Thus, from the standpoint of clinical diagnosis spontaneous past-pointing scarcely means anything at all. Some individuals are naturally inaccurate and one must not attach too much significance to the fact that the patient misses the examiner's finger. Furthermore, many patients even if they did have genuine pathologic spontaneous past-pointing as a result of some lesion of the central nervous system, may after a while learn to compensate and when examined such patients may find the finger accurately. However, past-pointing after stimulation is of greater significance, but after all it is simply an objective expression of the vertigo that is induced and may be easily affected or modified by many conditions, pathologic or otherwise. It is the presence or absence or the character of the induced vertigo that is of importance, and not so much its resulting past-pointing. A thing to remember is that "past-pointing" after stimulation is really normal pointing for the individual at that time. The stimulation induces a subjective sense of rotation; that is, though sitting absolutely still in a chair he thinks he is turning away from any point he has touched. When he thinks he is turning to the left of the examiner's finger he brings the arm down to the right, or "past-points" to the right and vice versa. To the examiner this appears as "past-pointing" but to the patient it is a correct physiologic pointing.

The vertigo that is induced is also a normal physiologic function. It is simply the recording within the brain of the motion-sensing that has occurred as a result of the lymph movement within the semi-circular canals. The physiology of this method of motion-sensing is as follows: When the head is turned to the right, with the head in an upright position, the lymph within the horizontal semi-circular canals lags and moves relatively to the left. The individual knows that he has turned to the right; as a result of innumerable repetitions of this same act the brain learns to interpret that whenever the lymph has moved to the left it indicates a body movement to the right and vice versa. Therefore, when the patient is first turned in the chair to the left he says when questioned that he is going to the left; that is not called vertigo because his statement is in accord with fact. If the turning is repeated fairly rapidly in a smoothly revolving chair we

reach a point when the lymph within the horizontal canals catches up with the speed of the body and is relatively not moving at all. The patient then will say, if questioned, that he is not moving at all, while as a matter of fact he is being rotated rapidly. If then the chair be suddenly stopped the lymph continues to move to the left as the result of the momentum imparted to it by the turning. This lymph movement to the left is immediately interpreted by the brain as body movement to the right and the patient will say that he is turning to the right when as a matter of fact he is sitting absolutely still. Here then we have an instance of information received by the brain along perfectly normal physiologic channels which is not in accord with fact. This "apparently wrong" information is called vertigo. These impulses, started within the ear, naturally traverse definite pathways to the cerebral cortex where they are received and accurately interpreted.

The nystagmus or eye-movement impulses have nothing in common with the vertigo impulses except that for a portion of their course the pathways for these two are within one bundle. While they both start within the ear, one has the eye-muscle nuclei as its objective, whereas the other must have the cerebrum as its objective since it results invariably in a definite concise conscious idea. As a result of disease some individuals when stimulated manifest one without the other—something which could not occur if they were both one and the same thing.

Dr. Wilson mentioned that he had never come across a case which would suggest to him that the fibres from the vertical canals have a different course than those from the horizontal canals. Dr. Fisher stated that he had seen a case that very day in Dr. Norcross' office where with a perfectly normal ear no response could be obtained from the vertical semi-circular canals but a very good active response from the horizontal canal was obtained. Evidently the pathways from these two sets of canals must not be together throughout their entire course. When one is very careful with the technic of the douching so that one set of canals alone is stimulated, a number of such instances will be encountered. The observation of Dr. Wilson that in cases of supposed occlusion of the cerebellar arteries one cannot elicit past-pointing was in conformity with Dr. Fisher's experience.

As for the rabbits having no quick component, Dr. Fisher said that while it may be true of rabbits he did not know how true it was of human beings.

Clinically, cerebellar lesions show spontaneous nystagmus. This, however, need not necessarily indicate that such a phenomenon is directly controlled by the cerebellum. The spontaneous nystagmus may be produced in these cases by pressure against the brain-stem. Dr. Fisher believed that a lesion limited to the cerebellum and exerting no influence upon the brain-stem would probably have no spontaneous nystagmus.

Replying to Dr. Pierce, Dr. Fisher said that while it was true that we did not know everything about the vestibular mechanism, and probably never would, there is no reason for being discouraged. No doubt some of the present day ideas will eventually have to be modified, but, on the other hand, conclusions in so many cases that have been studied with the present conception of the vestibular mechanism, have been verified by autopsy or operation that one cannot help but be impressed that we have even today a fairly good working formula. Under no circumstances must it be understood that this type of examination is intended for general neurologic diagnosis.

Replying to Dr. Lewy's remarks about involvement of the soft palate, Dr. Fisher stated that he had mentioned this simply as something which at times might be helpful in differentiating between a central and peripheral lesion.

GREENE COUNTY

At the annual meeting of the Greene County Medical Society, held at Roodhouse, December 10, the following officers were elected for the ensuing year: president, C. R. Thomas, Roodhouse; vice-president, C. R.

Bates, Roodhouse; secretary-treasurer, W. T. Knox, White Hall; censors, F. N. McLaren, White Hall; H. W. Smith, Roodhouse.

Dr. E. C. White, Springfield, a representative of the Division of Social Hygiene of the State Department of Public Health, was present, delivered an excellent lecture and presented motion pictures, one, the "Diagnosis and Treatment of Syphilis" and the other, "Gonorrhea in the Male." The lecture and pictures were well received and duly appreciated.

Dr. Wm. H. Garrison of White Hall was elected to membership, by transfer from Champaign County. Dr. Harvey W. Garrison of Hillview was elected to membership.

LA SALLE COUNTY

The La Salle County held its sixty-eighth annual meeting in Streator, at the City Hall, October 26, 1920, and were the guests of the Streator Physicians Club at dinner. The following officers were elected for 1921: president, W. E. Coulter, Seneca; secretary-treasurer, E. E. Perisho, Streator.

The following program was given:

"Helpful Hints in the Care of Eye Disturbances."—

Dr. A. D. Johns, Ottawa.

"Focal Infection and Its Relations to Diabetes."—

Dr. L. D. Howe, Streator.

"President's Address."—Dr. H. M. Orr, La Salle.

"Some Remarks on the Relationship of Psychology to Medicine."—Dr. Ralph Hamill, Chicago.

"Peritoneal Adhesions." The value of various substances which have been used to prevent peritoneal adhesions as determined by experiments on animals. Dr. Wm. R. Cubbins, Chicago.

"The General Care of Cardiac Cases."—Dr. Robt. B. Preble, Chicago.

MADISON COUNTY

Our November Meeting

The Madison County Medical Society met in Edwardsville on November 5, 1920, with Dr. F. O. Johnson, president, in the chair.

Twenty-five members were present.

The minutes of the last meeting were read and approved. The action of the officers in securing the services of Miss Alma Hurley, as seal sales manager, was approved and her appointment confirmed.

Miss Helen A. Highway was present and read her report for October which was ordered filed.

Dr. Chas. H. Neilson, of St. Louis, read an instructive paper on "Genesis of Neuroses," which brought out quite an animated discussion. He was tendered a rising vote of thanks.

Adjourned to meet in annual session in Alton on the first Friday in December.

PEORIA CITY MEDICAL SOCIETY

The Peoria City Medical Society met in regular session at the University Club, Peoria, Ill., December

21, 1920, at 8 p. m. The president, Dr. W. A. Hinckle, presided.

Officers for the coming year were elected as follows: president, Dr. John F. Sloan; first vice-president, Dr. C. G. Farnum; second vice president, Dr. W. B. Eicher; secretary-treasurer, Dr. S. H. Easton; delegate to the State Society, Dr. E. E. Nystrom; alternate delegate, Dr. J. H. Ulrich, all of Peoria; censor, three years, Dr. S. A. Smith, Chillicothe.

The speaker of the evening was Dr. W. W. Cutter of Peoria, who read an excellent paper on "Metalimetry."

A. J. BLICKENSTAFF, Secy.-Treas.

ST. CLAIR COUNTY

Our December Meeting

The regular meeting of the St. Clair County Medical Society was held in the Chamber of Commerce rooms, Murphy Building, East St. Louis, Illinois, December 2, 1920, 8:00 p. m. Eight members were present.

Dr. Cables read a communication from the American Red Cross, asking an explanation under what circumstances the East St. Louis physicians were opposing certain health services proposed by the Red Cross. This communication was discussed by all present and Doctors Lillie and McQuillan were delegated to forward a reply to this communication.

Objections were offered to the present meeting place, on account of the gates being locked at 8:30 p. m. After some discussion, Dr. Tharp moved, Dr. Gunn seconded, that the Society in the future meet in the office of the Health Commissioner in the City Hall. Carried.

The members agreed to have the regular January meeting on Thursday prior to the banquet, for the election of officers, and that an invitation be extended Dr. L. C. Taylor of Springfield to address the Society at this meeting.

No further business appearing, the Society adjourned.

WALTER WILHELMJ, Secretary.

UNION COUNTY

The Union County Medical Society met at the Stinson Memorial Library, Anna, Illinois, on Thursday, December 9, 1920, at 7:30 p. m. The president being absent the meeting was called to order by the vice-president, Dr. W. J. Benner.

Ten members and seven visitors were present.

After some discussion motion was made and carried that the Union County Medical Society endorse the retention of Dr. C. St. Clair Drake on the State Board of Health.

Dr. W. E. Lingle not being present with his paper the Society turned the floor over to Dr. W. F. Grinstead, president of the State Society, who spoke on "The County Medical Society." Discussion led by Dr. L. D. Keith.

Drs. S. C. Martin, E. V. Hale and W. F. Grinstead discussed the Compulsory Health Insurance.

Dr. C. H. Diehl, who was formerly a member of this Society, was invited to give an address to the members.

Adjourned.

E. V. HALE, Secretary.

Book Reviews

HISTORY AND BIBLIOGRAPHY OF ANATOMIC ILLUSTRATION IN ITS RELATION TO ANATOMIC SCIENCE AND THE GRAPHIC ARTS. By Ludwig Choulant. About 450 pages, Royal 8 vo., cloth. With one hundred illustrations. Translated and edited with notes and biography by Mortimer Frank, B.S., M.D., University of Chicago Press, Chicago, Illinois. Price \$10.00 net.

To this translation, Dr. Frank has added an exhaustive account of the researches made by Sudhoff and others on the recently investigated medieval manuscripts. There are also two supplementary sections on "Sculpture and Painting as Modes of Anatomic Illustration" and "Anatomic Illustration since the Time of Choulant." Many new illustrations have been added. This modernized version of Choulant is now published by The University of Chicago Press in the belief that it will prove an indispensable guidebook and coursebook to anatomists, medical historians and art students and that it will find its place on the reference shelves of all medical and public libraries, anatomical departments of universities, art institutes and art schools.

PRACTICAL DIETETICS with reference to diet in health and disease by Alida Frances Pattee. Thirteenth edition. Revised. 12 mo. Cloth 543 pages. A. F. Pattee, Publisher. Mt. Vernon, New York. Price \$2.25.

This book deals with the preparation of appropriate food for the sick and convalescent, giving in detail the method of preparing and administering liquid, semi-liquid, and solid nourishment. In each instance the total energy value of each recipe has been given, also a complete table of "Food Values," giving the calories for both "large" and "individual servings" of the various foodstuffs.

SYPHILIS. By Loyd Thompson, Ph.B., M. D., Illustrated with 81 engravings and 7 plates. Second edition, thoroughly revised. Philadelphia and New York. Lea & Febiger, 1920. Price \$7.00.

This is an excellent work of 477 pages. A goodly portion of the work is devoted to diagnosis and treatment. The chapter on laboratory diagnosis is very exhaustive and will be found very convenient as an aid to the general practitioner as well as the specialist in the treatment of syphilis. This edition is a great improvement on the previous one written three years ago.

THE ESSENTIALS OF HISTOLOGY DESCRIPTIVE AND PRACTICAL FOR THE USE OF STUDENTS BY SIR EDWARD SHARPEY SCHAEFER, F.R.S. Eleventh edition. Philadelphia and New York. Lea & Febiger, 1920. Price, \$4.50.

This book is intended as an elementary text book of histology comprising the essential facts of the science. The work is concise and brought up to date.

A MANUAL OF PATHOLOGY. By Guthrie McConnell, M.D., Associate in Pathology Western Reserve University, Medical School, Cleveland, Ohio. Fourth edition, thoroughly revised. 12 mo., volume of 611 pages, with 18 illustrations. Philadelphia and London. W. B. Saunders Company, 1920. Cloth \$4.50 net.

The fact that this is the fourth edition shows an increasing demand for this work. The author states that the work is not intended to take the place of more voluminous text books on Pathology, but that it shall enable the student especially to rapidly acquire the salient points of the subject. To this end the author has sought brevity, and at the same time has tried not to sacrifice clearness in the exposition of the material.

PUBLIC HEALTH AND HYGIENE. In contributions by eminent authors. Edited by William Hallock Park. Illustrated with 123 engravings. Philadelphia and New York. Lea & Febiger, 1920. Price \$10.00.

This is a work of 884 pages. Twenty-four authorities have contributed to this volume. The great importance of public health warrants the bringing out of a work like this. The work is intended for public health officials, physicians and medical students and each contributor has tried to make his section as practical as possible and to utilize to the full his own personal experience. This is a very practical work and should be in the library of every public health official as well as persons interested in public health generally.

PRACTICAL PREVENTIVE MEDICINE. By Mark F. Boyd, M.D., C.P.H., Professor of Bacteriology and Preventive Medicine in the Medical Department of the University of Texas. Octavo volume of 352 pages with 135 illustrations. Philadelphia and London. W. B. Saunders Company, 1920. Cloth, \$4.00 net.

This work is intended to briefly present the salient features of modern preventive medicine. The work attempts to cover the entire field and necessarily in a book of 351 pages great condensations of subjects matter has been effected. The author states his belief that this work represents the minimum knowledge of the subject which a student of medicine or a practitioner of medicine should be expected to possess.

LABORATORY MANUAL OF THE TECHNIC OF BASAL METABOLIC RATE DETERMINATIONS. By, Walter M. Boothby, M.D., and Irene Sandiford, Ph.D. Section on Clinical Metabolism. The Mayo Clinic, Roches-

ter, Minnesota, and The Mayor Foundation, University of Minnesota. Octavo volume of 117 pages with 11 Tables and Charts of explanation. Philadelphia and London. W. B. Saunders Company, 1920. Cloth, \$5.00 net.

This is an excellent work of 117 pages; will be found useful in every day clinical application. The book is well worth the money.

SURGERY. Its principles and practice for students and practitioners. By Astley Paston Cooper Ashhurst, A.B., M.D., F.A.C.S. Second edition. Thoroughly revised with 14 colored plates and 1,129 illustrations in the text mostly original. Philadelphia and New York. Lea & Febiger, 1920. Price \$10.00.

The work is strictly up-to-date. Much of the book has been rewritten. The author gives the benefit of his services in the American Expeditionary Forces. The chapter on gun shot wounds has been entirely rewritten, as have also the sections and other chapters dealing with shock, infected wounds, surgery of the pancreas, etc. The work is well worth the money.

PRINCIPLES OF BIOCHEMISTRY FOR STUDENTS OF MEDICINE, AGRICULTURE AND RELATED SCIENCES. By T. Brailsford Robertson, Ph.D., D.Sc. Illustrated with 49 engravings. Philadelphia and New York. Lea & Febiger, 1920. Price \$8.00.

In writing this book the author aims to present the subject of biochemistry in close relation to physiology, so that the student may perceive the intimate dependence of these two sciences upon one another. Emphasis has been placed upon the practical applications of biochemistry to the practice of medicine to industries and to general biology. The work meets thoroughly the purpose for which it was written.

CHEMICAL PATHOLOGY. Being a Discussion of General Pathology from the Standpoint of the Chemical Processes Involved. By H. Gideon Wells, Ph.D., M.D., Professor of Pathology in the University of Chicago, and in the Rush Medical College, Chicago. Fourth edition, revised and reset. Octavo of 695 pages. Philadelphia and London. W. B. Saunders Company, 1920. Cloth, \$7.00 net.

This is the fourth edition of this work coming out in quite rapid succession showing a great demand for the work. While the general plan of the work has not been changed, the work has undergone extensive revision. Nutritional factors that are essential to growth and repair has received a chapter in the form of new matter. Anaphylaxis and Allergy has received special consideration in this volume.

HEART AFFECTIONS, THEIR RECOGNITION AND TREATMENT. By S. Calvin Smith, M. S., M. D. Illustrated. Philadelphia: F. A. Davis Company. 1920. Price, \$5.50 net.

This is a carefully written book of 440 pages; 25 chapters and 83 illustrations. The book is written

from the standpoint that the author does not presuppose a knowledge of the subject and that strives to encompass in small volume sufficient fundamentals of anatomy, physiology, pathology, diagnosis and treatment to give the busy physician a working knowledge of the more recent advances in studies of the heart. This work will be found valuable to students, diagnosticians and internes.

1919 COLLECTED PAPERS OF THE MAYO CLINIC, Rochester, Minn. Octavo of 1331 pages, 490 illustrations. Philadelphia and London: W. B. Saunders Company. Cloth \$12.00 net

This work has been divided into nine subdivisions, as follows: Alimentary Canal; Urogenital Organs; Heart; Blood; Skin and Syphilis; Head, Trunk and Extremities; Nerves; Operative Technic; General Subjects. This volume is up to the standard of previous ones; it should prove a valuable asset to physicians and surgeons.

THE RADIOGRAPHY OF THE CHEST. Volume I, Pulmonary Tuberculosis with 9 lined diagrams and 99 radiograms. By Walker Overend, M. A., M. D., St. Louis. C. V. Mosby Company, 1920. Price \$5.00.

This work is divided into 9 chapters, is well illustrated in view of the increasing interest of radiography in the diagnosis of diseases of the chest. This work is very timely. It should be in the library of every physician who treats pulmonary diseases.

PSYCHOPATHOLOGY. By Edward J. Kempf, M. D. 87 illustrations. St. Louis: C. V. Mosby Company, 1920. Price \$9.50.

This book is written from the standpoint of giving a clear insight into human nature to the end that problems of abnormal behavior may be more readily appreciated by physicians, police courts, prisons and asylums, naval organizations, etc., an enormous amount of valuable clinical data is presented dealing with delusions, hallucinations, symbols, symptoms, defense and compensatory methods of thinking different types and causes of inferiorities. This work comes up to the expectation of the author and is worth the money.

THE ENDOCRINES. By Samuel Wyllis Bandler, M. D., F. A. C. S., Professor of Gynecology in the New York Post-Graduate School and Hospital. Octavo of 486 pages. Philadelphia and London: W. B. Saunders Company, 1920. Cloth, \$7.00 net.

The author shows that heredity is the most profound factor in life, that the development of tissues and structures of the body and the proper functioning of the various structures and tissues are all intimately connected with the work of the ductless glands, and that the function of all important autonomic nervous systems depends much, if not entirely on a proper balance of the endocrine

system. The work is up-to-date and is one of the best books on this important subject.

THE FORM AND FUNCTIONS OF THE CENTRAL NERVOUS SYSTEM. An introduction to the study of nervous Diseases. By Frederick Tilney, M. D., Ph. D. and Henry Alsop Riley, A. M., M. D., with foreword by George S. Huntington Sc. D., M. D. 591 figures containing 763 illustrations of which 56 are colored. New York: Paul B. Hoeber, 1921. Price \$12.00.

This is a voluminous work containing 1020 pages, 50 chapters. It is the most thorough work of this kind in existence. Indeed it is the only work which shows the clinical and physiological interpretation of the brain of the spinal cord in a manner adequate to the requirements of practical application. The work should be in the library of every student and teacher of nervous diseases.

PHYSIOLOGY AND PATHOLOGY OF THE CEREBROSPINAL FLUID. By William Boyd. New York: MacMillan Company, 1920.

This is a work of 176 pages, 20 chapters, 5 black and white illustrations, 6 colored plates. The author attempts in this volume to present some of the fascinating physiological problems connected with the Cerebrospinal Fluid and to show how they are related to the pathological problems which more directly concern the clinician.

THE COMMUNITY HEALTH PROBLEM. By Athel Campbell Burnham, M. D., New York: The MacMillan Company; 1920.

In this work the author has attempted to cover the literature dealing with what has come to be known as a community health movement and its relations to the modern conception of social medicine.

THE MAJOR SYMPTOM OF HYSTERIA. 15 lectures given in the medical school of Harvard University. By Pierre Janet, Ph. D., M. D., New York: MacMillan Company, 1920.

This is the second edition of this work. In this volume the author attempts to show that certain notions set forth in these lectures of 1906 have spread very much since that date and have played a great part in the interpretation of hysteria.

HYGIENE OF COMMUNICABLE DISEASES. A hand book for sanitarians, medical officers of the army and navy and general practitioners. By Francis M. Munson, M. D. Illustrated. New York: Paul B. Hoeber. Price \$5.50.

The aim of this manual is to present in a concise and readily accessible form the information now available concerning epidemiology and the management of the communicable diseases.

HOW TO REDUCE AND HOW TO GAIN. By William S. Sadler, M. D., and Lena Kellogg Sadler, M. D.

Illustrated. Chicago: A. C. McClurg & Company, 1920.

The title of the work is self explanatory. It treats of how to reduce and how to gain and the methods to be followed in order to bring about this ideal result.

PARACELSUS. His personality and influence as physician, chemist and reformer. By John Maxson Stillman. Chicago and London: Open Court Publishing Company. Price \$2.00.

So much has been said for and against Paracelsus that the problem of separating myth from fact in his life history is very commendatory. Recently there has been brought to bear a large amount of scholarly research, notably by German writers, for important contributions to the life story we are particularly indebted to the research of Carl Aberle, Ed. Schubert and Carl Sudhoff, Raymond Netzhammer, R. Julius Hartman, and Franz Strunz. For the partial solution of the problem of the authenticity of the works attributed to Paracelsus, we are chiefly indebted to the monumental critical bibliography of the printed books and manuscripts by Carl Sudhoff, the result of many years of exhaustive study of the collection accessible in the libraries of Europe.

To the work of these scholars and to other students of the work of Paracelsus, and to authorities on the early history of medicine and other sciences during the past half century, we are indebted for a new and better understanding of the personality, accomplishments and influence of the original and eccentric Swiss physician and philosopher.

NITROUS OXIDE OXYGEN AND ANALGESIA AND ANAESTHESIA IN NORMAL LABOR AND OPERATIVE OBSTETRICS. A monograph prepared for the benefit of all those concerned in safer and more efficient obstetrics and Anaesthesia published by the National Anaesthesia Research Society, 16 E. Broad St., Columbus, Ohio.

The Society believes that it has here the very last word in the scientific literature of the subject covered. Professional men will find the appendix of references particularly helpful. Every detail has been carefully worked out with a view to giving the profession what it wants and needs in the most readily acceptable type and in the most definite form.

THE SURGICAL CLINICS OF CHICAGO. Volume IV Number V (October, 1920). Octavo of 223 pages, 45 illustrations. Philadelphia and London. W. B. Saunders Company, 1920. Published Bi-Monthly. Price per year, paper, \$12.00; cloth, \$16.00 net.

This work gives the clinics of Drs. Speed, Carl Beck, A. J. Ochsner, Dyas, Moorehead, Cornell, Moody, Shambaugh, and others. It is up to the standard of previous numbers.

DIABETES. A handbook for physicians and their patients. By Philip Horowitz, M. D., with 27 text illustrations and 2 colored plates. New York. Paul B. Hoeber. Price \$2.00.

This is a small work of 183 pages intended by the author to bring about more intelligent co-operation between doctor and patient. The work treats of various forms of diabetes and gives the menus, recipes and tables to be used in the care of this disease.

THE SYSTEMATIC TREATMENT OF GONORRHEA IN THE MALE. By Normand Lumb. O.B.E. Second edition. Philadelphia and New York. Lea & Febiger, 1920. Price \$1.75.

In this little work of 120 pages, the author has attempted to include the most recent development in examination and treatment of the disease without materially increasing the size of the previous edition.

RECOVERY FROM FIFTEEN GRAINS OF COCAINE BY THE MOUTH

Bonjour of Lausanne reports in the *Revue médicale de la Suisse romande* for June, 1920, xli, 6, the case of a homosexual man aged 25 who out of spite against some person not named swallowed the contents of a gram bottle of cocaine. As he was employed in a laboratory there was no trouble in getting the drug. The dose was swallowed at 11 p. m. During the night there was total insomnia and mild agitation with diminution of general sensibility, both superficial and deep. The lower extremities had a dead feel. At 8 a. m. he was weak and ill and summoned the author. Two hours later he dressed and went to his office. The symptoms were remarkably mild, the pulse being apparently normal. There was no elevation of blood pressure from vaso-constriction; there was no "cocaine jag" and no increased reflex activity such as is common among snuffers. There had been no convulsive stage with subsequent motor paralysis. The sole symptoms were agitation and hypesthesia. There was no irregularity of the pulse, no ultimate lowering of tension; in fact, the symptoms agreed with those which follow the ingestion of small doses.—*Dr. Renoul.*

HUMAN AND BOVINE TUBERCULOSIS ARE SEPARATE AND DISTINCT DISEASES

AN ATTENUATED TUBERCLE VACCINE

Raw,* the distinguished tuberculosis specialist at Liverpool, thinks that human and bovine tuberculosis are separate and distinct diseases, but that the human body is susceptible to both, especially to bovine tuberculosis in the early periods of life. The two diseases are so rarely seen in the same subject that there are strong grounds for presuming that they are antagonistic to each other and that bovine tuberculosis may

*British Medical Journal, April 17, 1920.

confer an immunity against human tuberculosis and vice versa.

Possessed of this idea Raw has secured nonvirulent cultures of both human and bovine bacilli. From these he prepares separate tuberculin. Cases of glandular tuberculosis, and all tuberculosis in children, which is evidently of bovine origin, he treats with the tuberculin made from the human type, while, on the other hand, cases of pulmonary tuberculosis, due to the human type, he treats with tuberculin made from the bovine type. He says that tuberculin should always be prepared and used within a week; that it should be given in graduated and increasing doses at intervals of seven days; that acute reactions are not necessary; that not less than twelve injections should be given at intervals of one week, and that the most favorable cases for treatment are local lesions, but early cases of pulmonary tuberculosis may be limited and a further spread to other parts of the lungs prevented.—*J. of L. & C. M.*

FATAL CASES OF MENINGITIS WITH GLYCOSURIA AND NORMAL PANCREAS

Masary reports three cases of fatal cerebrospinal meningitis characterized by a constantly increasing percentage of glycosuria. The autopsies all showed inflammation of the third and fourth ventricle together with the typical lesions of cerebrospinal meningitis. In all three cases the pancreas and other organs were normal. Masary suggests that glycosuria in cases of cerebro-spinal meningitis should suggest invasion of the third and fourth ventricles. (Bull. de l'Acad. de Med. de Paris, June 10, 1919.)

ROBBING THE MEDICAL PROFESSION THE FAVORITE INDOOR PASTIME

Last year, the 46 hospitals in New York not maintained by the city, report that they provided 600,000 persons with free treatment for a total of 1,203,728 treatments, for which neither the beneficiary nor the city paid a cent. Many other cities report similar conditions. If statistics were available from the clinics and hospitals of the entire country, they would show that despite universal employment at the highest wages the world has ever known in the history of man, that from 3,000,000 to 5,000,000 inhabitants of this Utopian nation last year beat the doctor out of his bread and butter by seeking and receiving free medical and surgical treatment at these dispensaries of medical and surgical charity. Figuring an average of two treatments to a case at only \$1 a treatment, we have lost \$5,000,000 to \$8,000,000 we ought to have had. No other business or profession in the world would stand this leakage for one month without making a concerted effort to check it, and we do scarcely a thing. We surely are strange folks.

THE RESPONSIBLE PARTY IF PROHIBITION IS KILLED

Michael Angelo was pinched on the streets of Bologna one day because he neglected to place a seal

of red wax on his thumb to indicate that he was a stranger within its gates. The raids made by Prohibition agents on the private homes of citizens of Chicago and elsewhere last month in search of liquor stocks for medicinal and social uses, foreshadows the day—unless checked by legislative changes in the prohibition act—when all of us will have to wear wax on our ears or blinkers on our eyes to prove that we have been assayed and found free from contraband. If prohibition is killed, the zealots who invade private homes and the privacy of railroad berths will be responsible for it.

GOOD ADVICE IN THE PRACTICE OF MEDICINE

First and foremost is the tendency * * * to regard all sick people as *cases* instead of individuals, to ignore idiosyncracies, * * * to run all suffering humanity into one mould; in others words, to put sympathy for the *individual* on one side. Sir William Gull said, "In the Medical School you will be taught to classify everything and give a name to everything, but you will never be successful general practitioners unless you can cast this tendency behind you. You must never treat a case of pneumonia, but always John Jones or Mary Robinson, who presents to you a certain complex of symptoms which carries your mind's eye to a certain pathological condition in the lungs, and, if you are wise, you will probably treat John Jones on totally different lines to Mary Robinson. You will almost to a certainty have to give the disease a name for the benefit of the patient's friends, but put that name clean out of your heads as physicians. Think only of the individual."—*South African Medical Record.*

ALCOHOL AS A NERVE STIMULATOR

Dr. W. H. Porter, New York Medical Journal, April 3, 1920, says: Clinical observation has convinced Porter that many lives have been saved by the proper use of alcohol. He considered it to be a great mistake to drop so valuable an agent from the pharmacopoeia—an agent whose action is so definitely known.—*J. A. M. A.*

Howe says: "We are building our democracy on men, and developing our cities on a human rather than a property basis." And this means that the comfort, safety and health of a people are of more importance than are property interests, though both must needs be conserved.

Rapid eating means overeating and this means overtaxing of the stomach. Result: Indigestion, lots of discomfort and doctor's bills.

Intensive crop culture pays big dividends on the time and money expended. Then why not intensive care and culture for the child?—*Bulletin Chicago School of Sanitary Instruction.*

SPROUTED SEEDS PREVENT SCURVY

The Chinese have long made use of sprouted seeds in the form of salad, and combined with vegetables in various ways. Sprouted soy beans is one of the constituents of the famous chop suey. Recently Chick and Delf, of London, have made a study of the comparative value of dry and sprouted peas and lentils in preventing scurvy. They found that these seeds when soaked twenty-four hours in water and then sprouted forty-eight hours at room temperature, were five or six times as active as dry seeds in preventing scurvy, and in this respect compared well with many fresh vegetables.

So small a quantity as one and one-fourth grams of the sprouted seeds was found sufficient to prevent scurvy in guinea pigs. This amount is somewhat greater than the amount of raw turnip or cabbage, fresh orange juice or lemon juice, but is less than the raw carrot or beet root required.

The antiscorbutic power of germinated seeds is considerably lessened by boiling.

A very good salad can be prepared from sprouted soy bean seeds which have been allowed to grow to the length of about an inch. Sprouted soy bean seeds also add an excellent quality to vegetable soups. The property which these seeds have for producing highly valuable vitamins makes very desirable the encouragement, in this country, of sprouting seeds for culinary purposes. —*Good Health.*

Some people spend hours looking forward to a good dinner, and then after they have had it, spend several more hours regretting it.

It is as important that our bodies be kept clean and sanitary, as it is to maintain clean and sanitary conditions in and about our homes.

It is natural for a child to play as it is to breathe. Boys and girls will run, jump, climb and yell, because their natural instincts prompt them to do the things which will promote physical development.

Personals

Dr. M. J. Kalowsky of Waukegan has had his name changed officially to "Kaye."

Dr. P. F. Roberts of Kewanee has been elected

commander of the Kewanee Post of the American Legion.

Dr. J. W. Pettit of Ottawa held a free clinic at the Public Dispensary in Pekin, December 15, and gave an address on tuberculosis work.

Dr. A. J. Dalton, who has been located at St. Joseph, Ill., for the past thirteen years, is now located at 509 Robeson building, Champaign, Ill.

Dr. Samuel L. Thorpe of Clinton has been commissioned captain in the Medical Corps, U. S. Army, and has been assigned to service at Fort Sheridan.

Dr. Philip Schuyler Doane of Chicago has removed to Pasadena, Cal. Office address, Consolidated Realty Building; residence, 761 Prospect boulevard.

Dr. L. H. Hayes of Alton is said to have been expelled from membership in Alton Post of the Loyal Legion on account of fees charged for the treatment of former service men.

Lt. Overton Brooks, M. C., U. S. N. R. F. Recalled to active duty aboard U. S. S. Frederick, Philadelphia, Penn; for training cruise to Panama and West Coast, to be absent two months

Professor W. M. Pacella, who claimed a discovery that would cure "tuberculosis of the bone, and of the glands, and theoretically cancer, phthisis and leprosy," is said to have lost his fight in the state supreme court to obtain a license to practice medicine in this state.

Dr. Ethan A. Gray, superintendent of the Chicago Fresh Air Hospital, has been engaged by the LaSalle County Tuberculosis Sanitarium Board to conduct the monthly clinic, to investigate the work of the sanitarium, and to make recommendations for improving the care of the patients.

Dr. John Dill Robertson, Commissioner of Health of Chicago, has appointed Dr. Lee Alexander Stone, Surgeon (R.) U. S. Public Health Service and formerly Regional consultant on Venereal Disease Control Work and Social Hygiene for the P. H. S. in Illinois, Indiana, Michigan and Wisconsin, to the position of Chief of the Bureau of Hospitals, Social and Industrial Hygiene, Chicago Department of Health. Dr. Stone began work January 1st.

News Notes

—The Illinois section of the American College of Surgeons held its first meeting in Peoria, December 16-18.

—The North Central Illinois Medical Association held its forty-seventh annual meeting in Bloomington, December 7 and 8.

—Physicians interested in the study of tuberculosis met, December 16, for the purpose of organizing a special society to be known as the Chicago Tuberculosis Society.

—A report from the director of the Department of Registration and Education of Illinois states that reciprocal relations in medical licensure have been established between Illinois and New York.

—The state department of health has established a branch laboratory at Ottawa, in charge of Dr. Roswell T. Pettit, to be known as the north central laboratory. Other branches have already been established in Galesburg, Carbondale and Danville.

—The medical staff of Passavant Hospital, Jacksonville, elected the following officers: President, Dr. David W. Reid; dean of training school, Dr. H. C. Woltman; secretary, Dr. T. O. Hardesty; Drs. Walter L. Frank and Dr. Woltman were recommended as candidates for trustee.

—H. C. Selby of 5158 South Wabash avenue, Chicago, was arrested by the Department of Registration and Education of Illinois, charged with a violation of the medical practice act, for which he was fined \$25 and costs, November 30. A second count was dismissed on his promise to discontinue the circulation of advertising literature.

—The management of the Oconomowoc Health Resort announce the opening of two new buildings. One is for chronic nervous cases, and the other is an isolated building for "Rest Cure" patients. The latter units conform in construction to the previous ones, being absolutely fireproof. The classification of patients is complete in every respect.

—At a meeting of the north side branch of the Chicago Medical Society, held Thursday night, December 2, the cross of an officer of the Order of Leopold II was awarded to Drs. Frank Billings and L. L. McArthur in recognition of their

work for the cause of Belgium and humanity during the World War. Dr. Cyrille Vermeren,, Belgian consul in Chicago, made the presentation.

—The Chicago Community Trust announces the appointment of a medical plan commission under whose auspices there will be undertaken at once a study of the local institutional facilities devoted to the treatment of the sick and disabled. The commission is headed by Dr. James B. Herrick, and includes a number of representative physicians and institutional and social workers. The sum of \$15,000 has been set aside for this purpose.

—At a meeting of the board of governors of the Institute of Medicine the following officers were elected for 1920-1921: President, George H. Simmons; vice-president, C. Judson Herrick; chairman of the board of governors, L. Hektoen; secretary, E. E. Irons; treasurer, J. A. Capps. At the annual meeting, December 7, Dr. Thomas L. Gilmer delivered the presidential address on "The Relation of Diseases of the Teeth to Systemic Diseases" and Dr. Charles B. Reed spoke on "The Literary Effect of Hunger." Drs. D. J. Davis, Samuel J. Walker, J. G. Wilson and Arthur I. Kendall were elected governors.

—According to a recent ruling of Judge Joseph Sabath of the superior court, the health commissioner has a legal right to order the arbitrary quarantine of any individual declared by medical experts to be a carrier of typhoid bacilli. The ruling was given in the case of Mrs. George A. Barramore on a hearing for a writ of habeas corpus, proceedings for which were instituted by Attorney Clarence Darrow for the American Medical Liberty League, to gain her liberty from the County Hospital, where she was placed in quarantine by order of the health commissioner. The source of infection in five cases of typhoid fever had been traced to Mrs. Barramore; four of the patients were boarders at her home, the other was her son. The first case occurred in June, 1915, the second in July, 1918; two cases developed in July, 1919, and the fifth case occurred early in September, 1919. The court recognized that there is more danger of the spread of the disease through a carrier than through a bedridden patient, owing to the greater possibility of contact with others. The decision

acknowledges the commissioner's legal right to take any steps deemed necessary to preserve the health of the community.

Marriages

HARRY GEORGE LEON to Miss Anna Landis, both of Chicago, August 29.

ROBERT G. SAVAGE to Miss Edith Lavin, both of Oak Park, Ill., November 10.

RAY MCKINLEY DIX to Miss Olive Genevra Dickson, both of Chicago, recently.

SAMUEL BECK HERDMAN, Taylorville, to Miss Ara Large of Decatur, December 9.

JACOB J. MENDELSON to Miss Grace Helen Kamerman, both of Chicago, August 15.

WILLIAM GEORGE EPSTEIN, Chicago, to Miss Florence Virginia Simpson of Wheaton, Ill., recently.

Deaths

RANDOLPH FOSTER BRYANT, Chicago; Eclectic Medical Institute, Cincinnati, 1869; aged 72; died, November 11, from arteriosclerosis.

ROBERT H. PORTER, Chicago; Cincinnati College of Medicine and Surgery, 1874; aged 76; died, December 1, from carcinoma of the liver.

JOHN DENNISON COLT, Litchfield, Ill.; Western Reserve University, Cleveland, 1865; aged 80; a veteran of the Civil War; died, November 2.

OSCAR BOONE EDMONSON, Peoria, Ill.; University of Illinois, Chicago, 1907; aged 44; assistant physician of Peoria County; died, November 12, from diabetes.

THOMAS HENRY DONLON, Chicago; Northwestern University Medical School, 1910; aged 48; died, November 23, from injuries received when struck by a street car.

BERNARD S. PECK, Galva, Ill.; Jefferson Medical College, 1872; aged 75; one of the founders of the Galva State Bank; died, November 21, from cerebral hemorrhage.

THOMAS JEFFERSON PITNER, Jacksonville, Ill.; College of Physicians and Surgeons in the City of New York, 1869; aged 78; a practitioner for fifty years; died, December 3.

JEREMIAH D. DONOVAN, Lovington, Ill.; University of Louisville, Ky., 1868; aged 84; died, December 6. Dr. Donovan is survived by nine sons, seven of whom are physicians.

JOSEPH EDWIN HITE, Kansas, Ill.; University of

Pennsylvania, 1885; aged 62; for thirty years a practitioner of Kansas; died suddenly, December 4, from organic heart disease.

CASEY SIMS, Morton, Ill.; Chicago College of Medicine and Surgery, 1914; aged 32; was instantly killed, December 1, when the automobile in which he was riding struck a ditch and overturned.

JAMES B. BLAIR, Decatur, Ill.; University of Louisville, Ky., 1910; aged 37; was instantly killed, September 18, near Lafayette, Ind., when the automobile in which he was riding fell over an embankment and overturned.

FILIPP KREISSL, Chicago; University of Vienna, Austria, 1885; aged 61; a specialist in urology; a member of the American Urological Association; professor of genito-urinary surgery in Loyola University, Chicago; died, November 23, from endocarditis.

FREDERICK H. BATES, Elmhurst, Ill., Rush Medical College, 1878; aged 63; surgeon for the Chicago and Northwestern, Illinois Central, and Aurora, Elgin and Chicago Electric railroads; at one time a member of the school board of Elmhurst; died in Biloxi, Miss., November 27.

NATHAN SMITH DAVIS, Chicago, son of the illustrious founder of the American Medical Association, died in California, December 21, after a long illness from lymphosarcoma, aged 62. Dr. Davis was graduated from the Chicago Medical College in 1883, and early began a teaching career as associate professor of pathology in his alma mater, holding this position from 1884 to 1886. He later became professor of the principles and practice of medicine and clinical medicine in the Northwestern University Medical School which succeeded the old Chicago Medical College. For some years he served also as dean. In association with his teaching position he was attending physician to Mercy, Wesley and St. Luke's hospitals. Dr. Davis showed great interest in the improving of the pharmacopeia, acting as vice president of the U. S. Pharmacopoeial Convention, 1910-1920, and contributing many articles to medical literature on this subject. He served the American Medical Association in several capacities, acting as secretary of the Section on Practice of Medicine in 1887, as chairman of the Section on Pharmacology and Therapeutics in 1900, and as a member of the House of Delegates in 1902 and 1903. His interests were broad, including membership in the Ninth International Medical Congress and Pan American Congress, several offices in the Illinois State Medical Society, chairmanship of the board of scientific governors of the Chicago Academy of Sciences, and membership in the Chicago Neurological Society, the Chicago Pathological Society and the Institute of Medicine of Chicago. Several years ago, failing health compelled his retirement from practice and ultimately necessitated removal of his residence from Chicago to California. However, even during his declining years he kept up an active interest in medical progress.

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EFFICIENT PUBLIC HEALTH ADMINISTRATION THE BEST SAFEGUARD AGAINST RADICAL MEDICAL-SOCIAL LEGISLATION.*

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Every physician who keeps himself advised with the trend of medical progress is awake to the fact that there is an unusual spirit of unrest in medical matters; a tremendous awakened popular interest in medical-social affairs, and a warranted spirit of apprehension in the ranks of the medical profession.

Without entering into the discussion of the merits or demerits of compulsory health insurance, of the treatment of the sick by governmental agencies or any of the other factors of so-called "State medicine," we must recognize that all of these things are being looked upon with a certain amount of favor by a large number of people at the present time. This is possibly due to the general unrest following upon our engagement in the world war. It is partly due, perhaps, to the rapid strides in new directions which preventive medicine has made in the civil population under the necessity of war-time conditions. It is partly due to the new appreciation of the importance of health conservation implanted upon thousands of physicians during their experiences as medical officers in the war, and upon hundreds of thousands of citizen soldiery who were awakened for the first time to the advantages and necessity of sanitary and health regulation. It is largely due to the tremendously awakened interest on the part of the rank and file of the civilian population in that kind of efficient public health administration which will afford to the public, not only the highest degree

of disease prevention, but the highest degree of health promotion.

Whether we like it or not, the people as a whole have declared that individual health and public health are no longer matters to be relegated entirely to the medical profession, but are subjects of paramount individual and public interest. In its spirit of restlessness the public wants something more and something better in matters medical. In this spirit of unrest the public, like Caesar's army, "is desirous of new things," and as I see it, new things are bound to come.

Whether these new developments will be along the line of radical, medical-social legislation—idealistic and Utopian in character—which will be distinctly harmful, not only to the medical profession but to the people as a whole, or whether these new things will consist in supplying the public need and the public demand along the lines which have already received the stamp of medical and public approval and which are consistent with our existing American laws and traditions—is a matter which the medical profession itself will be largely able to determine.

It is impossible, in my opinion, for us to stay this restless spirit; impossible for us to placidly sit back and declare that we desire things to remain as they are. The spirit of restlessness and the awakened interest of the people will inevitably move us in some direction, and the proper determination of this direction will necessitate serious thought on the part of the medical profession and an awakening from our manifest spirit of indifference.

Thinking along this line Sir Arthur Newholme, sane and reasonable as he is, has said:

It is, I think, clear that the states will year by year take an increasing hand in medical matters. It is useless, even if it were desired, to attempt to oppose the inevitable and desirable trend towards a vastly increased realization by the state of medical science in the interests of humanity. It is for physicians to guide the course of events and insure that no plant is sown which will afterwards need to be uprooted; that

*Address presented before Southern Illinois Medical Society, Carbondale, November 4, 5, 1920.

no development is permitted which will hinder the fulfillment of our ideal.

But it appears to me that we must do more than to avoid radical things which will require uprooting. The Nation demands something positive and I believe that positive action may be taken—positive progress may be made without radicalism and without medical socialism.

The standards of public health administration throughout the United States at the present time are not satisfactory. There are few, if any, communities in the Nation where health control is as efficient as it should be. This statement requires no discussion, but if need be, is borne out and supported by the thousands of deaths and thousands of cases of entirely preventable diseases which still reduce the efficiency of the people of American cities where some form of health organization prevails.

The medical profession of the United States is not doing all that it can do in the prevention of disease or in the promotion of health. This is also a statement which is so obvious as to require no discussion, but, if substantiation be required, it is to be found in the thousands of births which remain unreported, in the thousands of cases of communicable diseases of whose existence the duly constituted health authorities are not advised; in the lack of support and, at times, the ill concealed opposition of members of the medical profession to the laws and rules and regulations enacted and promulgated, for no selfish interest whatever, but only for the prevention of human suffering and for the promotion of human efficiency.

After extended consideration of the present tendencies of medical progress and after conferences with competent authorities from all parts of the Nation, I am satisfied that solution of the grave problems which confront us will lie in the improvement of conditions indicated in the foregoing statements.

If we can give to the people that degree of protection which may be expected from an efficient public health administration, and if we can secure the united effort of the medical profession in the perfection of public health organization and administration, I am satisfied that the cry and demand for radical laws will be effectively stilled, and that the individual physician will find that the newly created public health machinery will contribute materially to his pro-

fessional and financial success and will threaten in no way his material prosperity.

I am so profoundly convinced of the truth of this assertion that I desire to devote the few minutes assigned to me today to the outlining of a broad public health policy for the State of Illinois, which we will consider, not from the standpoint of its manifold benefits to the people at large, but merely from the influence it will exert in stilling the present unrest and in preventing radical and unfortunate legislation now seriously threatening.

Since the termination of the war, thoughtful people have turned a searching scrutiny upon our existing public health organizations. With one voice they have condemned the skeleton organization to be found in Illinois under our present laws. They have seen that, while every acre of Illinois lies within some form of health jurisdiction, for the most part this jurisdiction is legal rather than actual and that it is hopelessly inefficient. The township board of health, consisting of the assessor, supervisor and town clerk, frequently men without the slightest knowledge of disease prevention, must disappear if the people of the state are to have any degree of intelligent or efficient protection.

There must be enacted within the next few years, as I see it, a law making it mandatory upon all cities of 25,000 or over, to create actual health departments under the supervision of competent medical full-time health officers selected through competitive test and each provided with an adequate public health machinery consisting of public health nurses, laboratories and all other things required by the modern conception of health organization. Such a law should make it mandatory upon the county authorities to provide like public health organization to cover all territory, outside of those cities of a definitely prescribed population.

In such an organization, the municipal health officer would have jurisdiction over the municipality and the county health officer would have complete jurisdiction over counties outside the larger cities. It might be well to retain in some form the township board of health as it now exists, the supervisor serving as the local representative of the county health officer and, under medical direction, having charge of such public

health details as the establishment of quarantine, the termination of quarantine, the distribution of educational literature and other duties not requiring medical or technical knowledge or skill.

In addition to his other duties the municipal health officer would be charged with the registration of births and deaths within the city, and the county health officer would perform similar function in the county, having under his jurisdiction all of the present registrars. By this plan the vital statistics of the county would be promptly and efficiently collected, the Division of Vital Statistics of the State Department of Health looking to the thoroughly trained health officer for complete and correct returns.

It has been the policy of the State Department of Health, so long as I have been connected with it, to decentralize rather than centralize public health authority. It is obviously impossible for a Director of Public Health, however large and well financed his organization, to intelligently and efficiently minister to the public health needs of the state, extending from the line of Toronto, Canada, on the north, to the line of Richmond, Virginia, on the south, and having within its boundaries nearly seven million people. While this policy of home rule in public health matters has been firmly established in the Department, it has been recognized that such home control will be entirely out of the question so long as the individual communities fail to employ competent and qualified health officers. Under existing conditions, it is necessary that the State Department of Health, so far as it is able, shall exercise control over local communities, not so much on account of the unwillingness of the local community to comply with the laws and health regulations, but on account of the lack of equipment and lack of technically trained personnel which are necessary to intelligent and effective health administration.

It is not to be inferred that, even after efficient local health departments are created, there will be no place for the State Department of Health. In fact, it will be then only that the State Department will begin to function as it should. The whole American legal structure places first responsibility for the lives and health of the people upon the state—not upon the local govern-

ment. It is the proper and natural function of the State Department of Health to promulgate rules and regulations for the control of communicable diseases; to standardize the methods by which such rules and regulations are locally enforced and to take charge when the local health machinery breaks down. It is the proper function of the State Department to maintain specialized divisions upon which the local authorities may call to solve unusual problems and to provide for the common health needs of all of the state. In its relationship with the efficient local health department it can always be exceedingly helpful exercising a supervisory and advisory power. But before the State Department can assume such general functions, local communities must be equipped to adequately meet their own ordinary health problems, and this can be brought about only by constructive new legislation.

It is obvious that in securing the passage of a law providing for this sweeping change in local health administration, as to the wisdom of which no one here present will raise a question, it is necessary to have the united support of the rank and file of the medical profession, and I believe that if this support of laws for the betterment of the public health is given by the profession in no uncertain terms it will be the first step and the most important step in preventing unwise and radical legislation.

But the development of the highest degree of efficiency in the prevention of disease and in the promotion of health means something more, as I see it, than the establishment of local governmental health organizations. There must also be the active cooperation in those phases of public health activity of a clinical character, concerning which we are now manifesting considerable apprehension.

The American Red Cross has proposed, as one of its many projects in its peace-time program, the establishment of so-called "health centers" in all communities throughout the Nation. It is suggested that these health centers be used to house the local health department and shall also be the headquarters for all extra-governmental health organizations so that there may be cooperation and co-ordination of governmental and

extra-governmental health agencies which will prevent the unfortunate duplication of efforts so apparent in the past, and so that these volunteer health agencies may exercise their highest function in supporting and assisting the duly authorized health authorities.

It appears to me that the county health center should be something more than that contemplated in the Red Cross program. As I see it, there should be in each county a health center in fact which would serve as the offices and headquarters of the local health authorities and for the extra-governmental agencies, for the public laboratories and medical libraries, for such clinics as may seem advisable, and for the community nursing service, but will also be supplied with general hospital facilities, particularly those of a semi-public character, and this great health center should be the meeting place of the county medical society and should constitute the centering point of all of the professional activities of the community.

The willingness of the people to create county medical institutions with the liberal expenditure of funds has been made apparent in the success attained in the establishment of county tuberculosis sanatoria throughout Illinois. Within the past two or three years over forty such institutions have been created. Several of them are now in operation; others in the process of construction, while plans for additional institutions are now completed. These active projects represent at the present time expenditures of approximately two million dollars—some of the counties expending close to a quarter of a million dollars in order to adequately meet this one medical and health need alone.

Recognizing the importance of the tuberculosis sanatorium movement, and the great good which this movement has brought about in every phase of public health endeavor, I believe that it is a little too highly specialized and that it would be wise in the development of the general county health plan to create in connection with the existing tuberculosis sanatoria a group of county medical institutions. This should include an isolation hospital for the various communicable diseases which, as we now realize, need not be isolated, as has been the custom in the past.

As I see it, there should also be a general hospital with good laboratory facilities, with good facilities for clinics, the whole group constituting the headquarters for every agency concerned in the health conservation of the county.

In counties in which the county tuberculosis sanatorium has not been built it would be wise to work out a general plan whereby all of the public hospital and medical buildings would be considered as a group.

I am presenting to you, as you will appreciate, a general plan, the detail of which has not been worked out. It is not my idea that these institutions should be all free institutions. There is no reason why they should not make adequate provision for those without funds and at the same time provide infinitely better quarters than most of the counties now possess, wherein the individual physician could care for his private patients.

I am firmly of the opinion that we will come much closer to efficient control of diphtheria, scarlet fever, typhoid and other communicable diseases only when we establish public hospitals for their care, throw these hospitals open to all, providing free beds only for those unable to pay, and permitting the family physician to provide the necessary medical attendance under financial arrangements with his patient.

As I see it, one of the salutary provisions which has protected the county tuberculosis sanatoria should unquestionably be included in any law provided for the establishment of the medical health center, and that is that there shall be no connection whatsoever between this hospital, health and medical center and a county almshouse; and further, that no person having anything to do with the management of a county almshouse or infirmary shall have anything to do with the management of this medical institution.

If such an institution as I have sketchily pictured can be conveniently situated in every county in Illinois it would mean many things for the betterment of the health and for the convenience of the people, and for the material prosperity of the medical profession.

It would mean that each county would be provided with adequate hospital facilities and that it would no longer be necessary for physi-

cians to send their patients to far-away points and transfer them to the supervision of city doctors.

The frequent visits of the members of the medical profession to this health center would mean an intimate contact with the county health organization—a more sympathetic understanding of the aims and purposes of the county health officer, and a more convenient means of keeping the county health officer constantly advised of all conditions or suspected conditions inimical to the public health.

It would mean the friendly gathering together of the medical profession in the daily pursuit of their work. It would mean more frequent consultation in doubtful cases. It would mean a wider clinical experience for every doctor in the county, and, what is more important, it would mean a higher classed and better medical service for the sick and a surer promise of complete and speedy recovery.

This better acquaintance, deeper friendship and more sympathetic attitude among the members of the medical profession would give a force of inestimable value in combating the evils which assail the profession today. The group of doctors which gathers each morning in the hallway of the medical institution, each one busy with his ordinary professional duties, means an infinitely greater force than the "paper" county medical society which meets only at long intervals and usually only a handful attending.

I have sometimes thought that it would be wise if every physician of the State of Illinois would have, in a conspicuous place on his desk, a card which I recently received, which reads: "Get acquainted with your neighbor, you may like him." The more intimate acquaintance among doctors, which would naturally come from this health center—which would be their work-shop, their meeting place and their forum—would create that brotherhood and unanimity of effort which in the past I am afraid has been more theoretical and imaginary than real.

Incidentally, the conditions now existing in the nursing profession offer another convincing argument for the establishment of such an institution as I have described. In many communities private duty nurses have declared a minimum wage

of six dollars per day for ordinary service, with a charge of seven dollars per day for obstetrical, mental, nervous and infectious cases, and it is now suggested that the hours of service be limited. Without entering into a discussion of the justice of these demands, it is obvious that there is a tendency to make private duty nursing service prohibitively expensive for the ordinary family, and consequently there will be an ever-increasing demand for hospital facilities. In fact, many of the prominent nurses declare that the day of the private nurse has practically passed—that the nurse in the home is an unnecessary waste of human endeavor and that, as the trained nurse has supplanted the old-time practical nurse in the march of progress, so must hospital care supplant the trained nurse in the home.

This change in the nursing profession has been very rapid. The demand for hospital facilities near at home has increased tremendously within the past two years and must be met in some way. As I see it, it can be met in no way more wisely than in this county hospital health center in which provisions can be made for the care of the private and the free patient; in which bedside or attendant nurses can be trained and from which visiting nurses may be sent to render necessary service to the convalescent on his discharge from the institution.

If we can offer to the rank and file of the people that degree of protection which can be offered only by the thoroughly competent municipal or county health officer engaged in full-time service in his public duties and provided with adequate public health machinery; if we can provide for the people satisfactory places for the care of all of the sick; if we can furnish a common meeting ground where all of the extra-governmental health agencies will come together in close contact with the public health authorities; if we can meet and solve problems for the people and for the medical profession, and particularly if we can devise the means whereby the members of the medical profession itself will come together with closer understanding and with more united purpose—we will have created the strongest and most impregnable obstruction to idealistic, Utopian and radical legislation.

A POLITICALLY ILL PROFESSION*

C. E. PRICE, M. D.

ROBINSON, ILL.

It seems there never was a time before when the following verse from "Lowell" was more applicable to the medical profession:

New Occasions teach new duties,
Who would keep abreast of truth.
They must upward still and onward,
Time makes Ancient good uncouth,
Lo, before us gleam her campfires,
We ourselves must Pilgrims be,
Launch our Mayflower and steer boldly
Through the desperate winter sea,
Nor attempt the Future's portal with
The Past's blood rusted key.

The new occasion to us is that all law-making bodies for the last few years are making laws detrimental, not only to scientific medicine, but for all that we stand for relative to the health and welfare of the people of the state.

When John D. Jackson wrote the "Black Arts in Medicine," about all the profession had to contend with at that time was the black sheep within their own fold:

Thus, time makes ancient good uncouth.
Then we must upward still and onward,
Who would keep abreast of truth.
We ourselves must pilgrims be,
Launch our Mayflower and steer boldly
Through the desperate legislative sea.

It is time wasted to discuss before a body of medical men how the health and lives of the people of the state are being sacrificed by laws permitting uneducated and unscrupulous individuals to practice the healing art with all the isms that can be compiled and thrust upon them.

You all see examples of this every day. It is also useless to discuss at this time what state health insurance will do for the sick and unsuspecting public.

But this is the time for the Public to be educated to a realization of the facts and who is to undertake this educational campaign? Who was it that discovered the things that prevent diseases? Who was it that educated the people to so act and live that their lives may be prolonged? Who spread the propaganda and put into effect these moral and statutory laws and by so doing took dollars out of their own pockets?

Groping for purely scientific attainments and utterly neglecting and forgetting many of the things that really help to relieve the sick, the profession has become not only ill but sick, nigh unto death. We have become like a child, tutored to develop its mind and its physical development sorely neglected.

We have allowed, through neglect, to creep into our body micro-organisms that are destroying our body politic, with the ravages and rapidity of the most malignant disease. Not only are these germs destroying the dignity of medical men but again I want to emphasize the injury they are doing to the people of the state.

Medical men, for generations, have been led to believe that by making themselves scientifically proficient, all else would take care of itself.

We have for sometime realized that the child could not live on science alone. The time is over ripe to begin developing the child's body and we must turn our attention to the business and political side of our lives if we expect to survive and regain our once respected and honored position, while our vitality and recuperative powers are still able to respond to stimulation.

A profession, like an individual, is liable to be negligent of itself and through its negligence, allow to creep into it maladies, that not only destroy the energy and thrift they once had, but who can claim that the profession maintains its once dignified position in the community?

When one man goes to college for six years, locates in a community, ready and willing to be of real service and do good for his community—another man goes to school for six months, locates in the same community, with equal privileges (so far as the average layman can see) as the six-year man. Going down the street they are both "Doc" to their neighbors and friends. They have both been licensed by the great State of Illinois to practice the healing art and consequently the one that is the best mixer has the strongest personality and is able to spread the strongest "salve" socially is the one that does the business.

I know a community, where lives a Chiropractor, who is doing more business than any of the eleven physicians and who is drawing a clientele from a greater radius around this town than all of the eleven physicians.

*Read before the 46th Annual Meeting of the Southern Illinois Medical Association, Carbondale, Nov. 4-5, 1920.

The sick and accident insurance companies are another diseased condition in the profession. The best way to combat them is not to agree to do work to conform to their schedule of prices. For instance, a concern in our town took out a policy covering both sick and accident insurance for their employees. The company wrote me that I had been suggested to them to do the work and to find enclosed a copy of their fee bill to cover charges for services rendered. I looked their fee bill over and found it to be at least 50 per cent less than our regular fees, so I wrote them a letter stating that these people had always paid their bills and had always paid the regular fees charged by our local physicians which was a standard for our County Medical Society and because they had paid them a premium for a policy (the insurance company to pay their bills), was no reason that my services were worth any less, and that if I did any work for them, that I would set my own price on services rendered and would not conform to their fees.

Now probably some one in the community is doing this work and for the fees stated by the company. If this be so he is cheapening and belittling himself and his profession and I will warrant not giving to the public the services that they should have or that he would give them if he was getting good fees.

So we could go on naming diseased conditions in the profession, but these are the paramount ones, the ones that we are going to have to combat in the next few months.

I have said that we have been negligent. We have been groping for new attainments. The medical profession is one of the oldest arts and it has gone through many changes of scenery. Many of the old scenes have been forgotten as new ones have been staged, some for the betterment of the human family—others to their detriment. I have often thought that the profession was as faddish as Paris millinery and the styles changing about as often. And here let me say that the laity have not been asleep to all of our neglects although they see us with imperfect sight. They see us with our faults exaggerated—see us with nothing hidden and judge us without mercy. We deserve much that we receive at the hands of the laity but let us hope not all.

In 1912 before the old Aesculapian Medical Society, I read a paper entitled "The Profession Responsible for Its Own Ills" (in which I said): "It is well known that all fiction is based upon some fact. So it is; that all Isms, Pathys and Cults pertaining to the healing art, are based upon some fact originating in the regular profession.

For instance, Massaging has been one of the reliefs given to man, under certain conditions, by the regular profession. But, how was it done? Either directed to be done, or the physician would give the affected parts a few strokes unsystematically, and in his hurry say to the patient or to the attendant: "You do likewise and that will help." But it did not always help when you expected it to, not so much because it was not indicated, but because of the crude application.

Medical teachers and text-books recommend it, but I never saw a clinical demonstration of its scientific application. If it is a good thing, why was it not taught, so that when we left college, we would know how to apply it, as well as how to apply a bandage?

Some one who knew that the profession recommended it and saw how it was being abused and neglected by the regular profession, took it up and is trying to make a distinct profession of it and curing all the ills of man. And thus we have Osteopathy and the regular profession is mad at themselves, and now for fear a patient might go to an Osteopath, we are afraid to recommend massage.

Mental therapeutics has always been recognized as one of the best armaments to battle with certain symptoms. Mental therapeutics has probably had more place in the teaching and discussing of medical problems than has massage. But yet we have never got right down to rock bottom, and given it the place it rightly deserves; or rather we have not taken the time, when opportunity presented, to get hold of our patients with a well-applied mental therapy. When you have once gained the confidence of your patient, your biggest task is over. For, if you do not do this all else is lost and you will probably lose your patient. For somewhere handy is a Christian Scientist who does know how to apply mental therapy with a master hand, and who, like the Osteopath, has found another

of our weak points, and tried to establish a profession of its own. One who not only claims to relieve all the ills of man, but who causes one to forget the unpleasantness of being sick.

And it has recently been suggested that the medical colleges establish chairs in their schools covering these subjects.

Now if we are diseased, and our disease is diagnosed, what is the remedy? The answer is simple, *Action and Concerted Action*.

In Isaiah, 38-1, it reads: "In those days was Hezekiah sick unto death and Isaiah, the prophet, the son of Amoz, came unto him and said unto him, thus saith the Lord. Set thine house in order or thou shalt die and not live."

Now I grant you this is an unpleasant task and is going to require a great effort. Medical men have tried to be a purely scientific body of men, going along doing all the good they could, forgetting self and family and now we see how unappreciated our efforts for humanity have been received.

Concerted action or organization is the remedy that will set us on the road to recovery.

When the State health insurance bill was before the State Legislature of New York, the State Medical Society of that State employed one of the best attorneys they could find to help them fight the bill. After working hard and earnestly with them for a long time and learning why they were not accomplishing the things desired, he told them to go home and organize.

The medical profession of Germany and Austria were forced to go on a strike due to compulsory health insurance. England is about to have the same thing happen. The medical profession has always been on the defensive side of all medical legislation. We now have a chance to step across the fence and should we wait until this thing is thrust upon us to strike or should we threaten a strike and let the people of Illinois know what to expect if they allow the legislature to enact a state health insurance law?

Organization and team work is the key note to success in any undertaking. As all work pertaining to the profession of the state must be carried out through the State Medical Society and as the component county societies are the pillars or legs upon which the State society rests and the source from which all of its support morally and financially comes from, then you

must see how all important it is to have a good firm-working county organization, so we must begin at once to put our own house, our county society in order. If men have been negligent of their county society because of the old routine of scientific papers, when they once learn that state health insurance and various other legislative matters that are coming will totally destroy and upset all they have been laboring for for years and will cause them to starve or look to other pursuits in life for a living; they will then be willing to assert their power in the county society in which they live.

There has recently been formulated a plan whereby if we can accomplish a close county organization, the medical profession will be looked up to and it will not be long before politicians will be coming to us instead of us going to them because they will see what a power we can be, and how many votes we can control in both local and general elections. But to do this, we must lay down our old-time party politics and vote and work in our communities for a principle and remember, not a personal principle but a principle to benefit the general public. The time is past when we can vote for a candidate because he is a republican or a democrat but he must stand for a principle in sympathy for the betterment of the health and welfare of the sick before he can gain our confidence and consequently our support.

It is too late in the day for our coming legislature which convenes in the next two or three months, but our time to do our best work is with candidates before the primaries; when the primaries elect the right men, we will have less trouble when they get to the legislature, all of which will be worked out by the new scheme of organization, adopted at a recent meeting of the council. It is to have each councilor to appoint in each county (in his councilor district) a physician who is to have charge of the political and legislative matters in his county. Then there is to be established a central office with a man in charge who is to keep in touch with all the political and legislative matters that come up in the state pertaining to the medical profession. And from him is put out to the councilors and from the councilors to the men appointed in each county, relay letters, telegrams, petitions or any other communications,

which in turn are to be sent back to the central office for his use.

If we expect to accomplish anything we must work and our work is laid before us. Talking does not accomplish anything. We have talked too long now.

James, 1-25, "But whoso looketh into the perfect law of liberty, and continueth therein, he being not a forgetful hearer, but a doer of the work, this man shall be blessed in his deed."

In Edgar A. Guest's poem on "Sermons We See," he says:

I'd rather see a sermon than to hear one any day;

I'd rather one would walk with me than merely tell the way.

The eye is a better pupil and more willing than the ear;

Fine counsel is confusing, but example's always clear.
And the best of all the preachers are the men who live their creeds,

For to see good put in action is what everybody needs.

SYMPOSIUM ON FOCAL INFECTION* CHRONIC FOCAL INFECTION

FROM THE STANDPOINT OF THE UNDERLYING
PRINCIPLES AND THE AREAS SECONDARILY
AFFECTED

Dr. E. E. Irons dealt with the underlying principles as usually understood and the areas affected in the following order:

The joints, the gastro-intestinal tract and the cardio-vascular system.

Details have already been published by Dr. Irons.

CHRONIC FOCAL INFECTION AS AFFECTING THE NERVOUS SYSTEM

WM. G. STEARNS, M. D.

EVANSTON, ILL.

In diseases of the nervous system chronic focal infection is of importance chiefly by reason of the role it plays as an etiological adjuvant. Lowering the body resistance to infection and toxins, perverting metabolism, retarding elimination and promoting disorder and disease generally.

We all recognize that a person bombarded by two or more infections is worse off than if he had only one. The relationship of one infection to another by the same or by different organisms as well as the relation of an infection to a metabolic or non-infective disorder is interest-

ing and most pertinent in the consideration of the effect of focal infection in nervous and mental diseases.

The normal defense of a body to a bacterial infection becomes enormously lowered by repeated or continued infection by that organism or the introduction of its toxin.

Death may be caused by the introduction of so small an amount of toxin that gives no perceptible reaction in the normal person uncontaminated by this particular organism or its toxin.

If a person with chronic furunculosis be inoculated with an excessive quantity of killed staphylococci, the furuncles are made temporarily worse and there is a general reaction, likewise the development of a fresh furuncle produces fever malaise, etc., a general reaction, and the inflammatory process in the active furuncle is increased and even the scars of the healed furuncles increase in redness and begin to itch.

In a tuberculous person the injection of an overdose of tuberculin will cause a general reaction and an inflammatory reaction in the lungs and other sites of infection.

It is also well established that while lowered resistance to an organism is developed through chronic and multiple infections by that organism, there is also developed, to a lesser degree, however, a lowered resistance to other organisms and their toxins.

As persons develop pneumonia after an acute alveolar abscess, tonsillitis, or furunculosis, persons with latent tuberculosis or syphilis often have violent exacerbations after such intercurrent infections. *Cerebro-spinal syphilis* is no exception and it is a matter of common experience that in *tabes* a tonsillitis, or other infection, is accompanied by the appearance or violent increase of the most distressing symptoms of that disease and, on the other hand, the eradication of a chronic infection is often followed by the improvement or disappearance of many of the symptoms and a period of months or years of quiescence.

In *paresis* the unfavorable effect of acute intercurrent infections is quite as bad as in *tabes* but the results of subduing chronic infections are not nearly so favorable as in *tabes*.

In my experience there is no class of patients where so favorable and long continued results

*Papers read at the meeting of Evanston Branch, Chicago Ical Society, April 26 and May 28, 1920.

are obtained from the eradication of chronic foci as in nervous syphilis.

The *progressive muscular diseases*, usually regarded as so hopeless that we consider our duty done with giving the diagnosis and an unfavorable prognosis. Upon therapeutic measures being insisted upon, we suggest, in a half-hearted way, electricity and mechanotherapy; yet by recognizing the cumulative, vicious effect of multiple infections and eradicating them, eliminating their toxins as far as possible, and paying strict attention to prophylaxis, we often not only stay the progress of these disorders, but secure even a great degree of improvement.

It is significant that *multiple sclerosis* is commonly preceded by acute inflammatory disorders and exposure to cold. Woodbury reports six cases of clinically typical multiple sclerosis, all of which had inflammatory disease of the upper respiratory tract and five had peridental infection. Of these cases, four had their tonsils removed and abscessed teeth extracted. Two of these four were relatively early cases, both had motor incapacity and bladder symptoms, yet they reported themselves as well. One other case, four months after operations, began walking without a cane for the first time in several years. The other case, rather advanced, after one and a half years, walks with greater ease, has less fatigue and works daily. All four of these cases are leading active, useful lives.

A patient seen by me last week presented a fairly typical clinical picture of *combined sclerosis* in the early stage. In January, 1919, she was under observation and examination at the Mayo Clinic and there a diagnosis of encephalitis had been made. Several infective foci in the mouth and throat were removed and she improved rapidly for a time and steadily for one year. A month or two ago she began growing weaker in the limbs and came to Chicago for relief. She had been having a mild inflammatory condition of nose and throat, which to me gave a probable explanation of her exacerbation.

In severe secondary anemias with clinical evidence of an associated combined sclerosis, we occasionally see a sudden complete paraplegia due to an acute diffuse myelitis. This exacerbation of the existing sub-acute infection can be

best explained in the light of our present knowledge as a superadded infection.

Myelitis, apart from that form of softening of the cord due to syphilis, is commonly found associated with acute or chronic infections and intoxications, more particularly tuberculosis and gonorrhea. It frequently follows furunculosis and more rarely the acute exanthemata. Here again it is significant that over exertion and exposure to cold are considered prominent etiological factors.

A few cases of *paralysis agitans* have been known to follow attacks of acute articular rheumatism.

In *chorea* the prime constant factor is a state of irritable weakness of the nervous system. The rapidly developing nervous system of the child is naturally unstable and lacking in inhibition. Emotions are quickly translated into motor acts and toxemias rapidly induce uncontrollable reaction. In no other nervous condition is the fire so well laid for an acute infection nor more often lighted by one.

Neuralgias and the *Neuritides* are undoubtedly produced by some known or unknown form of irritation—mechanical, inflammatory or toxic acting singly or in combination. While they are often confounded clinically with the arthritides, they often appear to be amenable to the same line of treatment; initiated by the removal of all foci of infection.

Paralysis of the seventh nerve is most rationally explained as due to the extension of infection to the fallopian canal.

It has been demonstrated that the toxin of tetanus reaches the cord through the sheaths of the spinal nerve fibres and evidence has been presented that the virus of rabies follows the same route. Duke attempts to show that the toxin of syphilis reaches the cord direct from the initial lesion via the nerve sheath. The possibility of a localized infection reaching the central nervous system via the neural lymphatics should, therefore, be borne in mind.

Persons of inherited or acquired mental instability become very quickly deranged by toxic conditions in the production of which chronic focal infections play a prominent part. This is most frequently noted in the arteriosclerotic and senile cases where *confused delusional* and often *delirious states* develop. They

are often most alarming, but quickly subside and disappear when the patient becomes de-intoxicated through increasing elimination, limiting the diet and eradicating local infections whenever found.

In *dementia praecox* and even in *manic depressive insanity* I have noticed many cases whose mental condition improved promptly following the eradication of foci of infection in the throat and mouth.

A short time ago I saw a girl nine years of age who for several weeks had had recurring attacks of *acute confusion*, becoming completely disoriented, who was promptly and permanently relieved by the draining of an infected sinus.

In all cases of disease of the nervous system and most mental disorders a thorough search for evidence of localized infection should always be made and frequently repeated, appropriate treatment given where found and prophylactic measures instituted.

So much attention is being given to the importance of focal infection by the medical and dental professions and the laity as well, that we are in great danger of attributing too much importance to such an infection, advising more radical measures than are warranted, expecting too immediate and great results, giving too favorable a prognosis, ignoring other etiologic factors and neglecting other therapeutics to the disappointment of all and the discredit of our profession.

Dr. E. V. L. Brown reviewed the work previously reported and showed statistics of findings in cases of iritis and related diseases when the cases were carefully worked out from the standpoint of etiology.

FOCAL INFECTIONS AND THEIR CLINICAL RELATIONS TO METASTASES IN THE FEMALE GENITALIA

A. BELCHAM KEYES, M. D., F. A. C. S.

CHICAGO

The question of a primary focal infection leading to a secondary metastatic infection of the female genitalia is one for our very serious consideration.

Till now to speak of, or in any way recognize the possibility of any infection of the female genitalia, except "by contact" has been consid-

ered rank clinical sedition and a loop hole of excuse.

This attitude must be steadfastly maintained till we have more positive data collected than now, to convince us either of resident or metastatic pelvic infection.

The almost complete elimination of puerperal fever (in-term-labors) by the strict adherence to modern asepsis and antisepsis partly confirms this opinion.

Yet to consider all and every infection of the female genitalia in the non-pregnant as well as the pregnant and puerperal, to be so undeniably of local "contact origin" as to preclude all conservative and sane consideration of any possibility of there being some few cases that are not of contacto-genital origin is unprogressive.

One is so often confronted with secondary metastatic infections in all of the other organs, parietes and the bones of childhood and youth, and indeed occasional peculiar infections in the female genitalia itself especially in the non-gravid that are possibly from other than the generally accepted ascending sources, a suspicion occasionally increased because of their irreconcilability with the usual types and etiologic history given by extremely reliable people, that one is occasionally tempted to doubt present-day teachings.

Before we discuss the unusual we should agree on the usual types and sites of the known female genitalia infections.

The usual types of ascending female genitalia infection are:

1. *Ascending intact mucosa contact infection*: (Noeggerath's theory) catarrh from rendered latent male gonorrhea, simple gonorrhea and gonorrhea-mixed (*Gonococcus* and pus).

The "normal" vaginal mucus except where neutralized by the alkalinity of the menses or other blood (fibroid, etc., hemorrhage) is too acid-antiseptic to allow ordinary pus microorganisms alone to pass beyond or live more than 6 to 24 hours in the vagina. In the presence, however, of and on the soil prepared by Neisser's microorganism, pus and tubercular microorganisms flourish.

2. *The wound ascending infections*: (a) Post-operative wound surface pus infections, e. g., after curettage.

- (b) Post-abortion or Post-term-labor wound

surfaces pus infection. (The so-called puerperal infections are ordinary pus, occasionally Neisser alone or both.) The longer the experience the more prone we become to feel the occult influence so often played even in puerperal infections especially after abortion, by the gonococcus.

In term puerperal cases, we have a wound surface which extends from the perineum to the whole endometrium via which infection can travel from the lowest (perineal tear).

The Sites of Ascending Infections

1. The intact mucosa with its ascending Neisserian infections are vaginitic, endocervicitic, endometritic, endo-salpingitic, oophoritic, peritonitic by continuity.

(Only 6 per cent of gonorrhea cases having true pus tubes, usually with a history of gonorrhea and pus, i. e., mixed infection following abortion or the result of injection treatment of the male.)

2. *The puerperal wound ascending infections are very varipus* in distribution or combination of distributions, i. e., the terminology puerperal fever is an omnibus term including:

(a) Simple saphro-phytic sapraemia from retained secundines plus infection;

(b) Puerperal endo-metritis gradually invades by superficial continuity as above, excepting that probably only those tubes in puerperal infection changed by a previous gonorrheal catarrh become pus tubes and lead to invasion of the peritoneum and ovary, or;

(c) Infection from the endometrium may early penetrate deep by contiguity (especially if streptococci) into the metrium and indeed the para-metrium;

(d) The looser parametrium especially after term labor is, however, most frequently invaded by infection via cervical abrasions or even deep cervical tears opening directly into it;

(e) Puerperal endophlebitis (especially at the placental site) causing thrombosis, phlegmasia, possibly pulmonary embolism, sudden death or lung infarct, lung abscess or empyema, or;

(f) Acute septicaemia or septicopyemia or any combination of the above.

DESCENDING METASTASES OF FOCAL INFECTION TO THE FEMALE GENITALIA

The consideration of these descending routes is what interests us in this paper. While there is every possibility of focal infections implicat-

ing by metastases the female genitalia, non-pregnant, pregnant, or puerperal, the differentiation from ascending infection is extremely difficult.

The Descending Routes of focal infections may be described "theoretically" thus:

1. Descending female genitalia infections from focal bacteria presumably swallowed (for the conditions which favor the passage of bacteria through the stomach I must refer you to the internist), gaining access to the peritoneal cavity, e. g., in cholecystitis, enteritis, colitis, appendicitis, etc., then without, but usually with some peritonitis may possibly "migrate" to the female genitalia.

2. The migration is presumably via Menge's wave in the peritoneal cavity to the ovaries and tubes and via the Fallopian tubes to the uterus. If the Fallopian tubes are changed by a previous Neisser's catarrh, descending pus tubes are probably more liable to occur.

(That the ovary often has (a) an ovulations atruim, and that (b) the tube with (gonorrheal) catarrhal changes invites pus infection and that (c) the puerperal uterus has a wound surface, and that (d) the puerperal para-metrium is much looser and easier for infection to spread, are facts to be remembered of possible "predisposing" importance even if descending infections are very rare.)

3. *Descending Infections via Adhesions*, e. g., between appendix or intestines and any part of the genitalia. Intestinal adhesions, e. g., to ovarian tumors, are common. The inflammations that incite adhesions formation may be primarily intestinal, primarily salpingitic, or primarily ovarian (torsioned) tumor, in all probability most often the latter.

Descending Infection via the Para-Tissue Spaces

4. This para-tissue is one loose space extending from the para-nephrium down to the parametrium and para-proctium, and anteriorly to para-cystium and cavum-Retzius to the preperitoneum. To speak of metastases from above downward via the para-tissues is somewhat paradoxical. Metastases by lymph and blood vessels occur upwards, but by gravity and size, pus "sinks" downwards, the infection often being attributed to the organ nearest the place of pointing.

An infection in the neighborhood of the kid-

ney, e. g., para-nephritic abscess, or infection of a retro-peritoneal appendix or retro-peritoneal intestines (ascending colon) gaining access to the para-tissues and becoming large in size (phlegmon) may easily travel (sink) downwards in the para-tissues to the para-metrium and be diagnosed as primary para-metritis of ascending infection origin. In one case I saw the pointing of the anterior surface of the upper third of thigh of a primary para-appendical abscess in a patient aged 42.

The literature contains many reports of parametritic abscesses that were probably primarily para-nephritic, appendiceal or para-proctial. (In passing it is of interest to recall that the early idea of puerperal para-metritis was that it was (sinking) Pott's disease, and women were almost frightened out of child bearing, because of this supposedly common accompanying vertebral tubercular danger in the pre-antiseptic days, till Duncan and Virchow gave the correct etiology of primary puerperal para-metritis, of ascending puerperal (cervixuteri) origin.)

5. *Descending Lymphatic and Blood Vessel Metastatic Infections to the Female Genitalia* are undoubtedly as possible as to any other organ even if clinically considered rare. Twenty years ago Ziegler's remarked that there is more lymphatic and blood vessel pathology than any other. Surgeons of long experience know that as the glands are the filter for the lymphatics; so the lungs are the filter for (*both descending as well as ascending*) venous infections. Arteries are not feared so much in these days of asepsis but we are in deadly fear of infection of veins, thrombosis and embolism either pulmonary or trans-pulmonary.

(a) *Primarily lymphatic descent* of focal infections may be to the subclavian veins then through right heart, lungs, left heart and systemic arteries to any organ of that system. (The finer lymphatic metastases are theoretically more prone to pass through the pulmonary filter.)

(b) *Primary Focal Thrombo-phlebitis and Embolism*. In the teeth, as in the unyielding bone in medullary osteomyelitis, the infection may, as it were, be forced into the veins causing possible thrombosis and embolism.

The lung symptoms of possible resultant larger emboli, lung infarct or abscess or pleurisy or empyema might cloud or be considered secondary

to the less pronounced pelvic or other symptoms, even if demonstrable metastases should occur concomitantly in the genitalia.

(c) Lastly, free bacteriemia with recovery or septicemia or septico-pyemia is a possible occurrence secondarily to focal infections.

That *focal infections* are possibly in some instances followed by, e. g., cholecystitis, intestinal infections, or appendicitis from swallowing pus, is probable with possible (a) secondary peritonitis and migration, or (b) para-tissue infection and (sinking) abscess, or (c) thrombosis and embolism into the pelvis, must be conceded as possible as metastases in any other distant organ, but their "remarked" concomitance is decidedly rare.

Of the predisposing influence of three physiologic loci of lessened resistance in the female genitalia:

(a) The ovarian ovulations-atruim and

(b) The at-term puerperal intra-uterine wound surface and

(c) The looser para-tissues of the whole pelvis; there is a question. All three being physiologic probably have a much greater resistance to infection than ordinary traumata or traumatic open surgical wounds, i. e., (1) The so-called anti-bodies after term labor may possibly be greater in the whole body generally and especially so in the ovulations (ovarian) and puerperal (uterus) wounds and looser puerperal parametrium and adnexae and, (2) The uterine contractions at a healthy maximum present a surface that is relatively bloodless, superficial, and well drained, the pus never being retained by "scab."

This peculiar increased resistance of the physiologic wound surface of the term-uterus is demonstrated by the mild course and superficiality noted in some very virulent streptococcus puerperal infections after term labors compared to infections after abortions which, notwithstanding our improved technique, still are a source of anxiety even in the absence of criminal induction or previous contamination.

A *local difference in resistance* in different parts of the body is also evidenced clinically in other parts of the body by, e. g., an infection extending from the hand to the elbow for three months without invading any other portion of

limbs or body; that was completely healed in two weeks by vaccines.

That certain normal tissues also differ in resistance to infection is evidenced by the very infrequency of metastatic abscess in adult bone via the blood stream, both when intact and also in simple fractures.

The deduction is then that the female genitalia, despite its apparently easy accessibility to possible focal infections by a *descending route*, is but rarely implicated either in the non-pregnant or in pregnancy or after term labor, when pus from the head would have its best opportunity to invade the blood stream from especially suppurating teeth, tonsils, etc., or via the so often abnormally constipated intestines, e. g., in eclamptic infections of liver, or via the looser para-tissues or by the peritoneal fallopian tube, Menge's wave route, to the endometric puerperal wound surface.

Lastly, in the occasional non-pregnant case in which neither history or proof of ascending gonorrheal infection, nor the history or curettings of a recent abortion can be obtained it would, however, appear as if we occasionally had an atypic infection, e. g., ovarian abscess from floating bacteria or descending infection by one of the routes mentioned above.

The proof is in finding the same kind of pus in, e. g., the teeth or tonsils, etc., and the pelvic infection and then proving it to be positively a descending and positively not an ascending infection.

Examination and if necessary treatment of the head, mucosa and bronchi should precede every operation and also be done in early pregnancy as should especially the teeth be, by a reputable, conservative dentist. Wholesale extraction in the hunt for hidden infection is as deplorable as the unnecessary removal of tubes and ovaries.

The following interesting cases, illustrating some of the points of this paper, were seen by the Essayist over a period of nine years:

T. E., aged 35. Suffering from pleuritis, for which she had been treated for two weeks. Examination revealed tubo-ovarian pelvic abscess—operation, Keyes, rapid recovery, no pleurisy since.

B. F., aged 36. Received blow on nose. Compound (mucosa) fracture of nasal bones, death in 4½ days of acute septicaemia.

A. B., aged 21. Pneumonia following criminal abortion 10 days previously, death on fifth day. Pelvis

clinically negative. Confirmed macroscopically at post mortem (no operation).

B. C., aged 24. Empyema following criminal abortion. Thrombosis, embolism, death on twelfth day (no operation). No post allowed.

G. R., aged 18. Chronic tubercular tonsillitis and cervical glands, both operated on (Gradle and Keyes), and two years later clinical symptoms of T. B. hip joint diagnosed and treated by Dr. John Ridlon. Six years later pelvic operation.

T. H., aged 35. Operated on by Dr. Henrotin. Retroperitoneal appendicitis—later pointing at junction of upper and mid-third of thigh anterior surface. Operation drainage. Henrotin and Keyes. Slow but complete recovery.

N. H., aged 40. Acute mastoiditis, subsidence of mastoid symptoms, treated for intercostal rheumatism of left side of thorax. Post mortem only by Keyes revealed pulmonary abscess.

G. C., aged 6. Slightly sore throat, ordered asperin by attending doctor, who lived at a distance (by telephone). So much better next day that she entered skipping rope contest, at 7 p. m. vomited blood, seen for first time then with Dr. Frank S. Churchill, vomited blood three times again, nearly four cupfuls, and died at 9:30 p. m. Postmortem by assistants of Dr. Le Count, specimens examined in his laboratory subserous hemorrhages throughout. Acute streptococcus infection.

Peoples Gas Building.

CHRONIC FOCAL INFECTIONS AS AFFECTING THE SKIN

ERNEST L. McEWEN, M. D.

CHICAGO

If dermatologists were asked to state what they considered the greatest problem in their chosen specialty I am sure the majority would answer without hesitation, etiology. The average textbook on dermatology indexes about two hundred principal disorders of the skin; this does not include subvaretics, nor those conditions which are proven to be produced by organisms. Of this two hundred I think we may safely say that etiology is *fully* understood in not more than 10 per cent.; that etiology is *partially* understood in about 70 per cent., and that we know almost nothing of etiology in the remaining 20 per cent.—about forty diseases. Hence it is that whenever a new idea comes forth which promises to throw more light on obscure problems in etiology dermatologists have been quick to investigate. Some years ago much work was done on the tropho-nenrotic theory as explanatory of skin diseases; more recently anaphylaxis and endocrine gland influence have

been studied in their bearings on dermatology; at present the subject of our discussion—focal infection—is receiving widespread attention. While the study of these may not have yielded the results anticipated much has been accomplished and enough progress has been made to stimulate further study.

Before considering the skin disorders of focal origin more specifically attention should be directed to certain points. First, what is meant by focal infection? There is great need for a clear definition of this term. In what I say I shall consider it to mean the production of skin eruptions by the direct action of organisms going out from a primary focus which exists under pressure elsewhere in the body. Strictly interpreted this does not include the toxic dermatoses which might arise from the absorption of poisons from some area within the body, nor does it include those eruptions which result from the gradual general dissemination of organisms from a single point of infection as in syphilis. I am aware that this definition may be contested but it is given in the interests of clarity and I would welcome a discussion of the point. The second item for consideration is the proof that a skin disorder is due to the presence of a distant focus of infection. This is very often difficult to establish. It requires the locating of the focus, the identification of the offending organism, the finding of the same organism in the skin lesions, and the production of similar lesions by animal inoculation. Evidence of a less positive and more inferential sort is readily found, but this is also less dependable as proof. The tendency to accept insufficient evidence as proof positive must be avoided in all instances; it is, however, impossible to throw inferential evidence entirely out of court.

As first of the skin diseases in which focal infection has been proven is to be mentioned herpes zoster. Rosenow, in a case from the skin clinic at Rush Medical College of extensive and severe thoracic zoster, was able to grow the streptococcus viridans from the badly infected tonsils of the patient, and by animal inoculation not only produced zoster lesions, but also recovered the streptococcus from the posterior nerve root ganglia of the inoculated animal. In this instance the proof was complete: focal infection is therefore always to be searched for in these

cases though it must be remembered that zoster has a rather complex etiology.

A second disease is erythema nodosum. This is a condition commonly associated with joint pains and not infrequently with sore throat. Rosenow again is to be credited with the demonstration. In the case of a young woman from the wards of the County Hospital which showed a well-marked erythema nodosum with considerable joint involvement he grew the streptococcus viridans from the deeper portions of the skin lesions and produced by inoculation into animals structural changes in the tissues identical with those of erythema nodosum. It is quite possible that erythema multiforme will be shown ultimately to be a focal infection. It is closely allied to erythema nodosum but its lesions are more superficial and the determination of a causative organism is more difficult.

A third condition which may be considered as arising at times from focal infection is carbuncle. In a case in my own experience the evidence, while not conclusive, is at least strongly presumptive. Some years ago the patient passed through an attack of appendicitis which proved to be streptococci; this came on suddenly during a period of apparently good health. About two years later a mild arthritis developed in one knee: this became worse very gradually; early efforts to x-ray the teeth were unsuccessful, apparently because of faulty technique, but ultimately a picture was secured which showed nine apical foci of infection. The offending teeth were removed and the knee returned practically to the normal in a short time. Nothing was done to the tonsils which were small and fibrous and not obviously infected. About a year later the knee became slightly involved again; then there began a series of carbuncles in different parts of the body, some of them severe in type; the urine was free from abnormal constituents and the reason for the condition was not easily seen. It was noted that the appearance of each carbuncle was preceded by an exacerbation of the knee symptoms; the teeth were accordingly again x-rayed, a few were found suspicious and treated; the tonsils were left untouched as they did not seem to be infected. Finally there developed almost simultaneously a carbuncle on the top of the head and an extremely severe attack of lumbago; it

was then decided to remove the tonsils and in the deeper fibrous portions of these pus was found though unsuspected from surface indication. Prompt restoration to health occurred and neither joint symptoms nor carbuncles have since appeared. I have recently had under observation a similar case of knee arthritis paralleled with carbuncles in which an infected focus is in operation. It is highly probable that the exact pathogenesis of carbuncle from latent infected foci will be worked out in the immediate future.

Fourthly, the group of dermatoses known as the tuberculides must be considered as focal in origin. These are found in association with tuberculosis elsewhere and it is significant that they are not infrequently observed after an acute awakening of activity in the systemic process. A case illustrating this relationship I have seen in this community. A young woman developed a sharp attack of pleurisy; a few days later there appeared over the entire body abundant lesions indistinguishable from those of chickenpox. Inasmuch as she had gone through with that disease in childhood a diagnosis of papulonecrotic tuberculide was made, which diagnosis was confirmed later by the prolonged course of the skin disorder. Some months later she sustained an attack of tubercular iritis.

There is a fifth condition in which focal infection as a cause seems in a fair way to be established, namely, lupus erythematosus. In a recent issue of the *British Dermatological Journal* (Vol. XXXI, No. 10-12, p. 186) Barber reports a case in which the streptococcus longus was found in pure culture in the tonsils; an autogenous vaccine produced a local reaction in the face lesions of the disease, which in the case of a large dose was very sharp; an acute lighting up of inflammation in the pharynx was attended with marked activity in the lesions, and the case cleared completely following the removal of all lymphoid tissue from the throat and the use of a vaccine. In another case this same organism was found abundantly in the feces. Barber calls attention to certain points that have been observed: the close clinical similarity between erythema multiforme, which is often found associated with streptococcic tonsillar infections, and beginning lupus erythematosus; and the frequent association of the latter

condition with rheumatoid arthritis, a condition quite generally ascribed to a streptococcic toxemia. Further observations and reports are needed to prove beyond question of doubt this apparent casual relationship between focal infection and erythematous lupus; the finding up to the present are admittedly very suggestive.

To sum up: we may say that there are a few diseases of the skin in which focal infection is causal; in some of these the proof is established; in others the evidence is strongly presumptive if not as yet positive. There are certain other skin disorders in which focal infection is rightfully suspected as being causal, but proof is not yet at hand; this group, which includes the various forms of pemphigus, dermatitis herpetiformis, lichen planus, etc., is destined to be studied most carefully from this standpoint. Lastly, proof must always be closely scrutinized before acceptance; and the need of a clear-cut definition of what is meant by focal infection must be recognized and met.

FOCI IN THE CHEST CAVITY

FROM THE STANDPOINT OF THE FUNDAMENTAL
FOCI, INCLUDING THE MEANS OF PREVENTION,
DIAGNOSIS AND TREATMENT

S. V. BALDERSTON, M. D.

EVANSTON, ILL.

I do not expect to add much to your knowledge of focal infection in the chest or any part of the body. I think Dr. McEwen raised several very good points in regard to focal infection; that is, as to the need for a better definition of focal infection, and particularly as applied to infection in the chest cavity. Shall we call chronic pulmonary tuberculosis with its group of secondary invaders, streptococcus, staphylococcus, etc., individually and collectively focal infections? I believe few of us would think of classing the disease with the focal infections. Dr. McEwen mentioned a blastomycosis of the skin with subsequent blastomycotic infection in the lung. Would he call that a focal infection of the lung? Heretofore it has been classed as a definite disease due to an infecting organism. It becomes apparent that we shall need a much clearer definition of focal infection at least in the chest cavity. Empyemas, for instance, are they to be called focal infections and so on down

the scale—old abscesses of the lung improperly drained and many infections that follow uncleaned up pneumonias, etc.?

In the report of the group work on focal infection done at the Presbyterian Hospital, certain cases of chronic bronchitis and some of streptococcus endocarditis are, I believe, the only chest infections included. During the discussion this evening it was suggested that it was to some extent a change of terminology not to say a change of fads and that a number of conditions now included under the term focal infections were formerly classed as manifestations of anaphylaxis. I am going to make a humble attempt to show that in respect to the two conditions just mentioned, namely, chronic bronchitis and streptococcus endocarditis, anaphylaxis and focal infections have many similar clinical and pathological manifestations and that it is not only possible but probable that the anaphylactic shock or succession of shocks lays the foundation for the infections which follow. It has been well shown for instance that in hay fever the victim becomes sensitized to certain proteins and as a consequence the nasal passages and accessory sinuses and later the bronchi become susceptible or sensitized to the invasion of certain groups of bacteria and also that hay fever neglected, if the victim is not protected or treated, leads eventually to serious infections of the nose, the sinuses and often of the bronchi and lungs.

Running casually over the pathology of acute bronchitis we find that the bronchi are covered with raised patches which may very well be homologous as they are certainly suggestive of the urticarial wheals seen as manifestations of anaphylaxis in various protein poisonings. In tracing the development of the bronchial lesions, these patches at first consist of the swollen epithelial cells which are gradually pushed up by the cells underneath, are separated from the basement membrane, there is leucocytic infiltration, and layers are thrown off, helping to form the exudate. If the process extends deeper the muscle fibres become infiltrated and even destroyed, and with the weakening of the walls a bronchiectatic cavity may be formed which is a potential focal infection. Now in the first stages of bronchial asthma with presumably no bacterial infection the pathology is said to be very similar

to that of acute bronchitis. In other words, pollen, horse dander, and foreign proteins of various kinds can and do produce lesions which resemble in every respect the lesions of bronchitis of bacterial origin and the presumption is that in many cases the foreign protein is the first invader, and opens up the way for a subsequent bacterial invasion. It is, I believe, conceded that in anaphylactic shock the explosion does not take place in the blood current but in the cell itself—in the present instance possibly in a group of cells in the wall of a bronchus or in the lung itself. It is more than suggestive of a most intimate relation of the two processes that what is called tissue tropism for bacteria in certain cells and tissues seem to follow right in the track of the lesions produced by one or more anaphylactic shocks.

Turning now to the heart conditions, endocarditis and myocarditis. Numbers of investigations have demonstrated streptococcus viridans in endocardial lesions and Herrick reports the apparent cure of cases of streptococcus endocarditis. The question again arises may it not be that the streptococcus is not the real cause of the endocarditis but merely a secondary invader as suggested above. The work of Longcope showed that in anaphylactic shock there were minute hemorrhages throughout the arterial system and in the heart itself, and he showed that this led to subsequent arterio-sclerosis. One group of cardio vascular specialists has followed this lead and believes that the meat proteins are the chief offenders in arterio-sclerosis and the dietetic treatment is followed out along these lines. Most clinicians in fact believe that primary invasion of the heart valves is rare without a previous injury, overstrain or what not of the heart valves. If this is the case, then what is claimed as a cure in such a case is merely a disappearance of the secondary invader in the form of bacteria. This is not an attempt to belittle the bacteriologic work done in focal infections or to minimize its clinical importance. I believe enough has been here suggested to show the importance of other factors which clinically were classical in lung and heart conditions before anaphylaxis or even bacteria were ever heard of—fatigue, exposure, previous injury to the heart following well recognized diseases, always keeping in mind that many of

these original causes were entirely apart from any bacterial origin.

A second reason which suggested this angle to the discussion is the feeling that the medical profession aided by the supply houses has reached a point in vaccine therapy, mixed vaccine therapy and polyvalent serum therapy which puts the much berated polypharmacy of the past generation on the blink, and has left the honest, straight-thinking practitioner in a maze with no one to lead him out into the open. The danger of sensitization by the ordinary proteins is well recognized and guarded against but what rule of science or common sense has been applied in the administration of multitudinous mixtures of bacterial vaccine proteins to prevent possible sensitizations and the production of pathologic results which may far outstrip the real or supposed original infection?

ABDOMINAL FOCI AS CAUSES OF GENERAL DISEASE (MEDICAL ASPECT)

WM. G. ALEXANDER, M. D.

EVANSTON, ILL.

Of the abdominal foci, probably the most important organs that are involved are:

1. Appendix.
2. Gall bladder.
3. Fallopian tubes.
4. Mesenteric glands.
5. Colon.
6. Rectum.
7. Gastric mucosa.
8. Bladder.
9. Uterine wall.
10. Peritoneum.

The bacteria emanating from these foci are:

1. Streptococcus hemolyticus.
2. Colon bacillus.
3. Gonococcus.
4. Tubercle bacillus.

The abdominal foci of streptococcic nature are, as a rule, secondary; the colon bacillus, the gonococcus infections are, possibly the tubercle, primary. The original site of the streptococcus infection is probably the teeth or the tonsils, and it must be remembered that in treating the secondary foci the original foci must be removed to effect the permanent cure of the patient. The colon bacillus and the tuberculous infections are

probably from food, the gonococcus of venereal origin.

Time would not suffice in a paper of this length to allow even a brief summary of all the various foci and I shall limit its scope accordingly.

One need only to call attention to the appendix as a source of infection that causes systemic involvement with loss of general health—a collection of symptoms that may involve almost every organ in the body. The diagnosis of the presence of a chronic appendix many times presents considerable trouble but when mild attacks of so-called indigestion, especially in early life, with some tenderness in the vicinity of McBurney's point, when under the fluoroscope (the barium meal having been given 12-18 hours before) the appendix or even the ileo-cecal junction is seen held by adhesions so that movement is reduced, and the tenderness is directly over the appendix as seen, with even a slight increase in the white count—all these point to the appendix as a possible source of infection. Chronic indigestion, neuralgia of the stomach, chronic gastritis, biliousness, and such indefinite terms should be thrown into the discard unless chronic appendicitis, gastric or duodenal ulcer, cholecystitis (all definite entities) can be excluded. I know now that many cases of "appendicitis" that I saw operated on while I was a student were in reality cholecystitis, gastric or duodenal ulcer. The greatest care should be used in diagnosing disorders of the appendix—and I believe a careful history and opaque meal examination (following the barium in its course through the entire intestinal canal by repeated examinations) should have a more common use. Rosenow has shown so well the close relationship between dental abscesses, chronic appendicitis and gastric and duodenal ulcers that one needs but to speak of it. I do not believe that every case of mild chronic appendicitis should be operated upon but I do believe it should be kept in mind in patients who show evidence of being under par and in whom no other focus can be found.

The gall bladder as a focus of infection is, I believe, not sufficiently emphasized by most physicians. I do not refer to the disability due to the pain nor the disturbance of the stomach—but to this possible source of streptococcus infection and secondly as an etiological factor in the

causation of the carcinomata of the gall-bladder and liver. We do not yet know the cause of carcinomata but we do know that infection may play a very important part in their causation, and we also know that carcinomata very commonly follow the infected gall bladder as well as the cases with calculi.

The following case history will illustrate the systemic results from gall bladder infection:

Mrs. B, aged 56, complained of vertigo, nausea, headache, and malaise, and showed on examination a blood pressure of 190-200/100. Examination of the urine, blood (including the Wassermann), x-ray examination of the teeth were all negative. The eyes were normal and the special examination of the labyrinths showed no cause for the vertigo. No gastrointestinal symptoms that suggested the gall-bladder had been present. Later she began to have some pain that simulated an angina and it appeared that the whole thing must be vascular, but a more violent attack showed the gall bladder as the probable offender and was removed with relief of the symptoms enumerated. The gall-bladder showed numerous stones and thick infected bile.

Diagnosis of gall bladders presents many difficulties and if one requires x-ray plates showing stones to make a diagnosis, a positive answer can be given in a small percentage of the cases—the younger the patient the smaller the number of positive results—but study of the history, the study of the action of the stomach under the fluoroscope, will usually give a clue to the pathological gall bladder. (The differentiation of gall bladder attacks and angina pectoris is often very confusing.)

The colon bacillus as a source of infection is hardly appreciated in its full value. I do not mean that mere intestinal stasis is the cause of as many ills as some would have us believe but I do mean that the many cases of renal infection by colon bacilli show us the possibility of the bacilli traveling long distances from the original source. It has been pretty well demonstrated that the renal infections are not, all at least, by way of the ureters but are probably by the lymphatics or the blood stream. Colon bacilli infections of the pleura giving rise to abscesses show how far from home the infection may be carried. When we think of the large sinuses and probably thrombi that exist in the walls of the rectum with the large flora there, small wonder is it that more secondary infections do not occur. It is probably due to our long friendship with the

colon family which has given us some considerable immunity.

The fallopian tubes may serve as a source of a general infection—either with the tubercle or gonococcus—see the cloud of witnesses of cripples with gonorrheal joints—with general destruction of health, even endocardial involvement.

The spreading of infection from a source that has given no evidence of any involvement was recently impressed upon me by the death of a patient following a hysterectomy for a pedunculated fibroid that had delivered itself into the vagina and had been there for some time with the attendant exposure to infection. The removal of the large pedicle required the removal of the entire uterus. Twelve hours after the operation the patient showed signs of a general infection and in seventy-two hours the blood showed the streptococcus from culture. The records show very few cases, the supposition being that the streptococci lay in the infected wall of the uterus and escaped into the blood stream after operation.

I am impressed almost daily with the commonness of the tuberculous infections which must be considered as a focal disease. Some one has well said that "tuberculosis is a disease of well life." and we have many possibilities of these tuberculous foci in the mesenteric glands, in the peritoneum and in the fallopian tubes. Diagnosis is either very hard or very easy—the history being very important.

DISCUSSION

Dr. Dwight Clark: In the interest of brevity I will simply emphasize a number of points already brought up, and perhaps mention one or two not previously mentioned.

The gall bladder is admitted to be a focus of infection. Its general treatment under present-day ideas involves a large, free incision so that the bladder can be generally viewed, so that a displaced gall bladder can be seen and manipulated, so that it will be possible to decide intelligently whether the gall bladder should be removed or simply drained. Some statistics mentioned by Judd in 219 cases of necessary gall bladder removal in which 120 had been previously drained, would suggest possibly the necessity of more frequent removal than has been done in the past. In connection with the gall bladder one of the most important points is the overlooking of stones which has resulted in the necessity of making subsequent operations.

The appendix is admittedly a focus and the only treatment is removal. Some interesting statistics are introduced by Evans of the University of Wisconsin

Clinic in which he found among the students 236 acute cases, 214 of which were the first attack and in 22 of which the attack was recurrent. Of the 214 first attack cases 183 showed primary throat infection, and in 113 of these the streptococcus was recovered with a tropism for the appendix. The particularly interesting point in this series of Evans was that the incidence of the acute cases was in direct proportion to the incidence of upper respiratory tract infections in these students.

In connection with these figures Anderson of the *Therapeutic Gazette* has criticized the surgeon in connection with a series of 550 cases in 634 previous appendectomies without relief. He blames the operator for a great many post-operative complaints of extra-enteric origin. He admits that a number of these cases are unavoidable where the appendix has been perforated, or where there has been a definite peritonitis, or where the ileum has been severed, or where there has resulted a scar, but his criticism of surgery is quite definite where the operator has overlooked a peptic ulcer in connection with the appendectomy, has failed to treat foci before and after the operation, has failed to treat constipation before and after the operation and has neglected to diagnose a peptic ulcer in connection with the appendix.

The peritoneum is admittedly a focus of infection. The peritoneum was formerly supposed never to be the primary seat of a lesion, but since the abdomen has been opened so many times, and the gall bladder, the uterine appendages, and appendix have been shown to be normal, it has been shown that peritonitis is sometimes primary, although most of these cases are secondary. An interesting discussion of the peritoneum was made a good many years ago when Little was studying focal infection. I think in 1904 Mayo, in discussing tuberculous peritonitis, brought out the fact that during the simple laparotomy for tuberculous peritonitis fluid was not always seen. At that same meeting John B. Murphy mentioned the fact that such peritonitis is often of tubal origin, which we know to be true, and he contrasted the ordinary infection with gonorrheal tubes which are always closed and with the tuberculous tubes which are always open, and the presumption was that organisms found their way out through the fimbriated ends and remained in the abdominal cavity. He explained this on the ground that complete drainage of the fluid resulted in the collapse of the fimbriated ends, and the further prevention of contamination of the peritoneum.

Ulcers, of course, are admitted to be foci. The results of treatment have been much better in recent years, especially since gastroenterostomy has been added to the excision of the ulcer.

The liver, spleen and pancreas are admittedly foci. The removal of the spleen has brought remarkable results in late years, especially in certain diseases that were supposed to have no surgical treatment.

I should like to emphasize two points in closing. 1. A region once infected or repeatedly infected may come to be a focus, or disseminate infection. 2. The

ease with which teeth, tonsils and sinuses are spotted as foci, often make it very easy to overlook foci in other regions, especially the abdomen.

Dr. A. B. Keyes: We are somewhat confused when the Doctor speaks of tuberculosis and gonorrhea both as focal infections. I think the time has come when we must look more broadly upon all of the mucous membranes as portals of entry of infections either primary or secondary.

Swallowed pus from head sinuses, tonsils or teeth and bronchial expectoration, are very important to consider etiologically in all infections of stomach, duodenum, gall-bladder or appendix.

I thoroughly agree that peptic (duodenal) ulcer may occasionally be mistaken for an appendicitis.

A tubercular appendix or tubes or both indeed, may occur secondarily to focal or pulmonary tuberculosis from swallowed pus.

Dr. Will Walter: I am sorry that Dr. Balderston did not dwell more upon tubercular foci (foci in the lung). We certainly have cases which may be traced to such foci. Dr. Jackson recently reported a case in which there was a T. B. manifestation in the eye; nothing was found upon physical and x-ray examination, but the patient was given a tuberculin test; a focal reaction followed, hemorrhage and death. Postmortem showed a primary infection in the lungs, small but involving a large vessel.

FOCAL INFECTIONS ORIGINATING IN THE GENITO-URINARY TRACT.

ROBERT H. HERBST, M. D.,
and

ALVIN THOMPSON, M. D.,
CHICAGO.

Focal infections of the genital and urinary tracts may originate in almost any part of these tracts, the lower end of the genital tract, the prostate gland and seminal vesicles being the most common site.

Toxemias or metastatic infections originate only in those parts in which there is poor drainage. The urinary tract, while it holds great theoretical possibilities as the focus for a generalized or metastatic infection, is comparatively infrequently found to be the source of such an infection. It would seem that metastatic infections would be common in pyonephrosis, pyelitis, obstructed ureter and in various infections and obstructions of the bladder, yet the literature contains but few cases of actual metastatic infection; toxemias, however, in such cases are fairly common.

In the genital tract including the urethra and its adnexa, especially the prostate and seminal vesicles, the focus of a metastatic infection is fre-

quently found. Among the metastatic manifestations of genito-urinary origin are arthritis, synovitis, myositis, iritis, endocarditis, pleuritis, meningitis, various skin lesions, abscesses in almost any part of the body, anemia and septicemia.

In pyelitis, pyonephrosis and other lesions of the upper urinary tract metastases are rare, though there is commonly a coexisting severe toxemia. Young contends that arthritis is usually a coccus disease and as most cases of pyelitis are caused by the colon bacillus, this may also be a reason for the rarity of arthritis secondary to this lesion.

The bladder is not an absorbing organ, but in bladder infection due to obstruction from an enlarged prostate, stricture, etc., toxic symptoms are frequently noted, but there is here as in kidney infections a scarcity of reports of actual metastatic localization.

Of the infections of the urethra and genital tract, gonorrhea is the commonest, and from it metastatic infections and systemic symptoms frequently develop. In chronic disease of the prostate and vesicles in which gonococci are not found, symptoms due to absorption are also quite common.

The commonest of the metastatic infections originating in the genital tract is the so-called gonorrheal rheumatism including involvement of the joint surfaces proper and the periarticular tissues. Some of these cases are true metastatic infections with actual changes in the joints and gonococci present, while others in which no bacteria can be found and in which there are no gross changes in the joints are apparently toxic in character. These latter respond much more readily to treatment than the former.

Iritis is frequently of gonorrheal origin, although this etiology is not so common as was formerly believed. On more complete investigation a large number of cases occurring in individuals having gonorrhea are found to originate in other coexisting foci, especially about the teeth, tonsils and sinuses.

There are many individuals suffering from no demonstrable metastatic lesions, but who are troubled with vague pains and aches, who are physically below par, and who are frequently classified as neurasthenics in whom we find a chronic prostatitis and vesiculitis often of post-gonorrheal origin as the underlying cause of

trouble. In many of these patients the focal origin of their condition is demonstrated when their symptoms are relieved by appropriate treatment of the prostate and vesicles.

Infections of the urethra, including periurethritis, granular and follicular urethritis, and stricture cause comparatively few metastatic infections. The prostate has long been recognized as an organ which may be the seat of a focal infection. Its tubules furnish a large absorbing surface and its numerous minute ducts are readily occluded when the gland and the prostatic urethra are inflamed. Therefore, drainage from the prostate is poor and it easily lives up to its reputation as a focus of infection. However, the seminal vesicles are almost invariably infected along with the prostate and are, in our opinion, even more frequently foci of infection than the prostate. In many cases we have, by means of massage, effected a subsidence of the prostatitis and secured good drainage of the prostate, but the secondary symptoms have persisted until more radical and direct treatment of the vesicles has resulted in clearing them up.

The vesicles are tortuous tubules with ramifying diverticulæ and extensive mucous surface with an insignificant easily occluded outlet. When infected and swollen they are the worst drained organs in the human body. It is characteristic of vesical infections that they have a tendency to persist and become more or less latent and, therefore, the lesions secondary to them are also characterized by chronicity.

Epididymitis may cause generalized symptoms of a toxic nature and may possibly be the cause of a metastatic infection. However, we must bear in mind that there is rarely an epididymitis caused by pus organisms without a preexisting vesiculitis, and so, if we find an arthritis and epididymitis coexisting, one cannot jump to the conclusion that the epididymitis is the focus. More than likely the inconspicuous vesicle, while not so noticeable as the inflamed epididymis, is the real focus.

The treatment of focal infections originating in the genito-urinary tract consists primarily in removing the infection from the original focus. Besides this, symptomatic treatment is indicated to alleviate the pain whenever it is possible as, for instance, in iritis local treatment is beneficial and in arthritis, salicylates, immobilization and

local applications of heat are often helpful. Vaccines and serums are sometimes useful, but their curative value is doubtful.

In many cases the metastatic and toxic manifestations disappear or are relieved by spontaneous subsidence of the focal activity or following non-surgical treatment of the focus as in the ordinary treatment of pyelitis.

Foci of the upper urinary tract usually respond when appropriate attention is given to the original focus. Urethral infections, including strictures, should be treated, bearing in mind that seminal vesicle infection may coexist.

Prostatitis and vesiculitis which are the commonest focal lesions, should always be looked for in any infection of doubtful origin in the male. When found, it is a question of judgment what form of treatment should be followed. In some cases skillful massage will establish drainage and, thereby, effect a cure. Many cases of vesiculitis do not respond readily to massage and surgical intervention is advisable.

The surgical means of eradicating infections from the seminal vesicles are vasotomy with injection of collargol, vesiculotomy and vesiculectomy. The simplest procedure, the vasotomy, is usually effective and consists of injecting collargol through the vas deferens into the vesicle. Incising or excising the vesicles are major procedures and are seldom indicated because the simple and less destructive vasotomy usually accomplishes the desired result. Some of the most striking results are obtained in the treatment of focal infections which have their origin in the seminal vesicles and prostate gland.

DISCUSSION.

Dr. B. C. Corbus: From what I have heard of these two symposiums it seems to me the issue is confused a little bit. You speak of primary foci and also of secondary infection. In the focal infections in the urinary tract you can divide them into primary focal infection, secondary focal infection, hematogenous focal infections and extraneous focal infections. Of the primary infections we have, to my mind, no more beautiful example of focal infection than is seen in syphilis. We have the primary infection where the spirochete comes and grows until, as we may say, he gets big enough to go through and then goes on and makes the systematic invasion. The same thing is true of gonococci; he comes in and walks through the penile apparatus and without much disturbance, but as soon as he gets located in the prostate he immediately causes foci of infection, with the later systemic invasion. You can have tubercular in-

fection and streptococcic infection, but it seems to me they are not primary but secondary to focal infection somewhere else in the body. This is especially manifest in tuberculosis. Dr. Herbst has told you that gonorrhea is primarily the cause of most of the infections in the genito-urinary tract. I think we do not realize the value of the complement fixation test in gonorrhea. It will give us from 90 to 100 per cent. positives.

As to treatment, I want to congratulate the Doctor on his treatment. I have not adopted it as a great many men have in Chicago, but if it proves to be as he said we will soon have a way of eliminating all the causes of foci in the urinary tract. To my mind, we have not solved the gonorrhea at all. The use of silver solutions is the best thing we have, but there must be something better. I think few of us realize that heat will kill the gonococcus very easily. One hundred degrees kills it within a short time; at 104 degrees it will kill the gonococcus instantaneously and we can use it up to 117 degrees in the urethra without doing harm. Perhaps at some future time we will have something in the way of heat that can be used easily and thus be of great service.

GOITER OPERATION TECHNIQUE.*

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Having determined that operation is demanded by the conditions present, surgical judgment must decide whether thyroidectomy can be done with safety, or whether palliative measures must first be made use of. The proper course to pursue depends almost entirely upon the condition of the heart. When you have determined exactly the condition of the heart then you can usually decide with precision as to what to do at this particular time for this particular case.

Excision of the diseased part of the gland does cure with certainty. Justification for operative risk should not be determined by increasing or decreasing exophthalmus; by Graves' disease, hyper or hypo-thyroidism, thyrotoxis or complicated tumor of the gland. The question should be, will the condition of the heart permit of excision of a part or all of the diseased portion of the gland? No other treatment has been of permanent value.

It is an almost universally accepted belief that exophthalmic goiter should not be operated upon during a period of acute exacerbation; that any operation performed while the symptoms are increasing is liable to result seriously, that if the

*Read before the 70th Annual Meeting of the Illinois State Medical Society, at Rockford, May 19, 1920.

operation is performed while the symptoms are decreasing the result is almost sure to be satisfactory. This theory has arisen from the fact that during the period of exacerbation auricular flutter is often present and any operation is dangerous, and that auricular fibrillation has usually occurred by the time that the exacerbation has ended. If auricular flutter is present no operation is to be thought of until the flutter has been eliminated.

The minor palliative operations usually employed to tide the patient over the crisis and make a future radical operation safe are:

1. Injections with boiling water or quinine—urea hydrochloride solution.

2. Ligation of one or both superior thyroids or one or both inferior thyroids.

Ligation of the superior thyroid has been a favorite procedure in some large clinics. We usually prefer the injection treatment to the ligation of the superior thyroid artery. It is impossible to cover up the scar because of its location high in the neck. Ligation of the inferior thyroid is not a popular operation, but we prefer it to ligation of the superior thyroid. By making an incision $\frac{7}{8}$ of an inch long through the skin and superficial fascia one inch above the clavicle, retraction of the sterno-cleido-mastoid muscle inward and upward brings the small incision right over the inferior thyroid between its origin at the thyroid axis and where it goes under the carotid. The operation at this place is easier than the one of ligation of the superior thyroid. We get as much benefit from the ligation of one inferior thyroid as we do from ligation of both superior thyroids.

Thyroidectomy: We prefer local anesthesia in all serious cases. (The patient with the drug habit excepted.) We used gas and local anesthesia combined, gradually depending more upon the local and developing our technic until at the 167th operation we used local only.

We always have an anesthetist ready to promptly give gas if indicated. We used local in one series of 72 consecutive cases without resorting to any inhalation anesthetic. The position of the patient on the operating table is important. The shoulders should be forward, the head slightly back. If you expect to sever the muscles transversely the head can be held further back. But if you expect to remove the goiter

through a small incision without cutting muscles it is better to place no extra tension upon them by holding the head too far back.

The most satisfactory technic in our experience for operation with local anesthesia is the simplest one. The skin and subcutaneous tissues are first infiltrated, then a fine needle should be passed down through skin and muscles to a point just above the upper pole of the side you expect to remove and all the tissues surrounding the upper pole infiltrated. If both upper poles are to be attacked the other side should be likewise injected. The incision should be made low and symmetrical, but not over the ends of the clavicles. It should be made down to the platysma, perpendicular to the skin, leaving a layer of fat on the flap. Raise the flap, separate the fascia and muscles from the sternum to the cricoid and down to the isthmus of the gland. Free the gland to each side. Tie all bleeding points. If you are going to cut the muscles, place your clamps and cut the muscles outward to the edge of the sterno-cleido-mastoid. If you are not going to cut the muscles you must plan the next step carefully.

You have the two lobes and the isthmus. The mechanics of delivery of each lobe is not dissimilar to that of a posterior vertex presentation in obstetrics, the lower pole of each lobe representing the vertex, the attachment at the isthmus the chin, the superior angle of the muscles, the pubic arch and the lower angle, the perineum. To deliver the lobe you must have flexion, extension, rotation and progress. Should the case be easy, you can rotate the lobe, sever the attachments at the lower pole, get to the blood vessels at the upper pole and the removal be attended with no particular difficulty. But if you anticipate any difficulty in such a manoeuvre, pick up the capsule at its attachment to the trachea above the isthmus and sever the superior attachment of the isthmus across the trachea; this will free the superior edge of the isthmus from the trachea. Tie every bleeding point. Remove all forceps. Then you will find the reflection of the capsule from the internal side of the superior poles to invite you to extend the dissection outward and upward along the anterior and inner side of the upper poles. There are usually some very vigorous blood-vessels in this area, including some branches of the superior thyroid. The

blood supply is so free from this source that unless severed at this time the hemorrhage will be annoying from any cut portion of the lobe.

Now, having freed the superior edge of the isthmus and the anterior attachment of the lobes to the peri-laryngeal structures and controlled the hemorrhage, the isthmus may be moved upward, the lateral lobe can be moved upward and inward, without traction upon the trachea and larynx. Slight upward and inward traction brings the lower pole into the small opening. By cutting between snaps you can sever the attachments at the lower pole, the remaining attachments of the isthmus along its lower border and the thyroida intima. By traction on the forceps attached to the gland and by manipulation it can be flexed, rotated and extended so that it will slip out through the small opening. Now if the attachments between the inner and anterior side of the upper lobe and the peri-laryngeal structures have been sufficiently separated the whole lobe can be drawn out and the upper pole drawn down until the last attachments, the branches of the superior thyroid that approach the gland at the upper pole, are visible and can be clamped and cut. The other branches of the superior that sometimes pass down along the larynx and cross over to the gland were cut when the gland was freed from the larynx. Sometimes when a lobe reaches very high above the cricoid the opening in the median line as described cannot, without difficulty, be retracted sufficiently to reach the superior thyroid branches at the upper pole. By passing a forcep through a small opening made in the fascia above the omohyoid down upon the tip of a finger held at the upper pole it can easily be made to grasp all the blood-vessels at that point. Cut between the forcep and upper pole of the lobe and after the lobe has been removed the forceps with grasped vessels can be brought out through the fascia and the blood-vessels tied with ease.

Having one side delivered, the isthmus freed from the trachea, the same procedure can be carried out on the other side with much less difficulty and the entire gland removed. The vessels must all be securely tied, the lymphatics as well as the blood-vessels, the muscles, then the fascia brought together, and the skin closed neatly.

The question arises: why not cut the isthmus at the start? That is all right, but it is better

on account of hemorrhage to sever all superior attachments of the isthmus and the inner attachments of the superior lobes before you cut the isthmus. Some operators cut the muscles across from the central opening to the edge of the sterno-cleido-mastoid between clamps. This procedure makes the operation easier, but in case infection develops and the muscles do not unite, the larynx and trachea are covered only by the skin. By not cutting the muscles, the shock is not so great, the muscles are uninjured, the convalescence is shortened, the discomfort is lessened, the control of the voice is not interfered with, and the mortality is lowered. Many patients who are good surgical risks for the operation that is done without cutting the muscles, are poor surgical risks for operation with clamped and cut muscles.

Have we not concluded that goiter really injures the circulatory system, really causes Graves' disease, really destroys emotional balance, really damages the brain, the nervous system and various structures in the body, and really shortens life, and that bad results occur not only occasionally, but that in almost, if not in every case of goiter, medical treatment requires months of time? If we conclude that at the present time we have no other treatment that is reliable and satisfactory except removal, then if the mortality and length of convalescence can be reduced to that of simple appendectomy and the discomfort of the ordeal lessened, can we not say that every patient with goiter should have the benefit of early diagnosis and early operation?

DISCUSSION

Dr. J. F. Sloan (Peoria): It has been my good fortune to be invited by Dr. Sloan on several different occasions to see him in his work—between ten and fifteen different cases, different sized goiters, some that have been operated on previously, and certainly it was a very easy matter for him to remove those glands with the technique that he is using.

Dr. E. P. Sloan (closing discussion): Yes, you sometimes hear that goiter work is not satisfactory. I see a great many cases that have been operated upon and the result is not satisfactory, frequently it is not because they have been operated upon for goiter but because the diseased part of the gland has not been removed in its entirety. About three years ago we gained the courage to remove the gland entirely. The patients in which we remove the gland absolutely and entirely seem to get along better than those in which we have not removed the gland entirely. We hear so much about the various things that are going to happen

to your patient if you remove all the gland, but we haven't seen any serious disturbance following operation where the entire gland was diseased, we don't give gland after operation unless there is an indication for it. I don't say that these troubles will not occur, but we haven't seen them, and we have seen a great many cases in which the after result was not satisfactory because some of the diseased part of gland was left. I do not mean to advocate the entire removal of the entire thyroid every time you operate for goiter, but I do advocate the removal of every particle of the gland *that is diseased*. I think you ought to be just as careful as you are in operating upon an ovary to remove every particle of diseased tissue. Remember, *diseased* thyroid tissue is not secreting *normal* thyroid secretion.

THE SPECIAL FIELD OF NEUROLOGICAL SURGERY AFTER ANOTHER INTERVAL*

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Individuals engaged in scientific or professional pursuits have need of a periodical accounting of stock no less than those engaged in business. The results of such an inventory may sometimes be of more than personal interest, especially when projects have been undertaken which are in a measure novel or special, for their success or failure may encourage others or may deter them from similar adventures.

SPECIALIZATION IN GENERAL

In a sense, I suppose, every medical graduate tends in time to particularize to a certain extent, and through liking or opportunity comes to be known as more expert or better informed than his fellows in one thing or another. He may have had an unusual experience in relation to child-birth, shown unusual skill in dealing with the ailments of children or with the maladies to which their mothers are heir. He may have a mechanical bent and be particularly apt as a setter of broken bones or a corrector of deformities. He may be a particularly good microscopist or show greater facility than his contemporaries in the use of some other precise instrument of importance in diagnosis. He may have become engrossed in some special disease, indeed of some particular organ, or what is more, of some special form of treatment for a particular disease of a particular organ. His interests may become purely scientific or purely sociological

and take him away from the bedside entirely. Of all this there is no end or ever will there be. For there are ways innumerable in science or practice in which we as individuals or groups of individuals come to particularize in our work.

The participant in this subtle process of specialization may not be always conscious of it, or, if so, may not wish to admit the fact even to himself and would encourage his employers, be they trustees, patients or the Commonwealth, that he is equally capable of dealing with all branches of his larger subject. On the other hand, the concentration of effort may be intentional and represent a desire to contribute to knowledge, rather than income, though they are not necessarily divorced, and for this the individual must perfect himself in certain directions rather than others.

Thus the specialist and specialties arise, but in the case of each of them, should progress cease after a generation or two, it is inevitable that the imitators of the pioneers will diminish in number as well as quality. And when this time comes, following a period of more or less disrepute, the particular species of specialist dies out, and the prodigal specialty returns to, or should return to, its parents. If this happens, the reunited household will unquestionably have profited by the episode.

Medicine as grown in the fashion of a Banyan tree. In the beginning there was a single stem. This, in the remote past, each professional aspirant learned to climb, and in his lifetime could encompass without difficulty all the knowledge its various branches represented. But from the main branches which the original tree put out, particularly from physic and surgery representing the application of medical knowledge to practice, there soon dangled many roots. Some of these finally reaching the ground became attached, and drawing up their own nourishment have in some cases enlarged and become permanent and necessary supports to the parent branches.

Modern aspirants sometimes climb these outlying props, mistaking them for the main stem or believing that they have found a short and less crowded way to the top where others they wish to emulate are seen to perch. The temptation is great and to some irresistible, but short cuts to specialization without thorough preparation in the fundamentals make incompetent if

*This address was made to do double duty before the Tri-State District Medical Society at Waterloo, Iowa, Oct. 7th, and the Cleveland Academy of Medicine, Oct. 8th, 1920.

not dangerous practitioners, and so long as this is permitted within the profession itself we should be less tolerant of those who have smuggled themselves into the tree with no medical preparation whatsoever—the osteopath perched insecurely on a limb propped by massage and the Christian scientist tip-toe on another feebly supported by psychotherapy.

Be this as it may, in time there has come to be a veritable grove of trunks and every season new roots become grounded in such increasing numbers it is difficult for the untutored to realize that the growth really represents a single tree. To be sure, an outlying prop to a limb may occasionally dwindle and disappear as botany has disappeared; or after a period of temporary vigor it may become incorporated with an adjacent and more vigorous one, but the general tendency is for a further and rapid multiplication rather than for any reduction in number, for, though no longer needed, an old prop dies reluctantly if once it has come to support an important branch.

Near the centre of the tree are two particularly large parent branches, one of them perhaps more flourishing and well supported of late than the other, but both of them apparently essential to the welfare of the tree. From legend alone do we learn which of the two probably represents the main stem and which the secondary offshoot. Whether physio was a specialty which branched off from General Medicine before surgery, or surgery before physio, is not quite clear.

In its westerly transplantation to different countries in successive eras the tree of medicine to be sure has not always put out the same branches in the same way. We may recall the words of the distinguished Philadelphian, John Morgan, who in 1765 on his return from Edinburgh announced in his justly celebrated Discourse his intention of limiting himself henceforth to "those cases which belong most immediately to the office of a Physician" and of no longer "interfering in the proper business of Surgery." From this it could be argued that the practice of physio thus withdrawn from General Medicine which included handicraft, became in this country at least the first avowed specialty. For the real standard of specialization is the determination to avoid diffuseness by withdrawing from participation in the wider

field and devoting oneself to a more limited one.

One might pursue this subject further and trace the development of some of the various secondary offshoots both of physio and surgery in the past and see what has happened to them—whether they have taken secure root and continued to flourish or whether after a generation or two they have either died back or become incorporated again with one of the main stems by fusion—but interesting as this might be it is not the purpose of this essay.

New specialties at present undreamt of will continue to arise. It takes little to start one. The diseases incidental to a novel occupation like aviation, the introduction into the clinic of a new discovery, like Wassermann's reaction, or Röntgen's Ray; a new instrument of precision like the calorimeter—such things as these will make a succession for all time of unlooked for opportunities for us and our followers in medicine to engage in new endeavors under novel conditions.

These must be regarded as accidental occasions for specialization, to be distinguished perhaps from the purposeful determination to specialize within an established branch long occupied. But under both circumstances those who can best take advantage of existing opportunities or can originate others, not only must have had a good general training in medicine and surgery, but must have been thoroughly schooled in the fundamental subjects—in the anatomy, physiology and chemistry of morbid as well as of normal tissues and organs, for without these things any special branch is supported by a root lodged in sand which does not long survive overloading. There is only one way to get a secure seat on any outlying branch and that is by approaching it from the main stem, no matter how wearisome, laborious and time-consuming this process may be.

SPECIALIZATION IN PARTICULAR

In 1905¹ and again in 1910² a paper was read before the Cleveland Academy of Medicine under this selfsame subject of Neurological Surgery as a specialty. The first of them was written shortly after the decision was made to limit my operative surgical work to what seemed to my several

1. The Special Field of Neurological Surgery. Cleveland Med. Journ., Jan. 1905, iv, 1-13; also Johns Hopkins Hosp. Bull., Mar. 1905, xvi, 77-87.

2. The Special Field of Neurological Surgery: Five Years Later. Cleveland Med. Journ., Nov. 1910, ix, 827-863; also Johns Hopkins Hosp. Bull., Nov. 1910, xxi, 325-339.

advisers, and indeed to me at the time, to offer small pickings. There had dangled for long from the branch of surgery, if we may continue with our Banian-tree simile, a wisp of root over a very unpromising patch of soil. It had become attached on more than one occasion, though feebly to be sure and tested thoroughly by Agnew in this country and later by von Bergmann in Germany, it had for reasons not far to seek been abandoned as both unfruitful and unsafe. Later on, Victor Horsley turned his brilliant mind to the subject with far greater success than his predecessors, though he showed more interest and perhaps skill in its physiological than in its purely surgical aspects.³ Specialization is an uncompromising mistress. It was an avocation of Horsley's not a subject to which he limited himself, and though he had imitators he left no disciples.

It hardly seemed possible fifteen years ago that the surgery of the nervous system by itself could furnish material enough to occupy a surgeon's undivided attention and insure him a livelihood, far less that it would promise opportunities within itself for further specialization on subjects like tumors of the brain in general or tumors of the pituitary body in particular. Time has shown indeed that these early misgivings were unfounded, and that there is not only an appeal but abundant opportunity for special workers who plan to restrict themselves to this outlying branch is evidenced by the fact that a number of surgeons interested in the nervous system have organized themselves into an Interurban Neuro-surgical Society in the expectation thereby of making more rapid progress in this specialty through an intimate interchange of opinions made possible by clinical meetings.

It is impossible within the limits of an address to enter at all fully into an account of all that has transpired in the field of neurological surgery during the past decade, far less to give anything more than hints of what lies before us in the way of problems. I shall restrict myself, largely, to some of the topics which have engrossed the attention of my coworkers and myself during the interval, though they represent but a small portion of the larger work in which many have become engaged.

To conform more or less to the plan of my former papers I shall allude in turn to the surgery of the brain, the cord and the peripheral (cranial and spinal) nerves,⁴ with such comment and digressions as I may be led into under these separate headings. But before entering on these subjects I desire to say something about a mysterious personal quality necessarily possessed in varying degrees of perfection by everyone who does something with his hands—namely his technique.

Neuro-Surgical Technique. Perfection in the conduct of his therapeutic measures is as essential for a surgeon as is the technique of laying on colors for an artist or of producing sound for a musician. One may have abundant knowledge of art or music or medicine and yet be a poor performer. In surgery a proper technique is by no means the only element of success but it is an important one.

Let us look back for a moment on the conditions at the beginning of the century, when from our present standards the methods of conducting both cranial and spinal operations were crude beyond the belief of our juniors who happily know better times. The day of the mallet and chisel for opening the skull was not far removed. An exploratory exposure of the brain was looked upon by the prospective patient with the same dread with which an abdominal operation had been regarded a generation before, and by the surgeon with comparable misgivings. Few if any operators ventured to undertake one of these procedures except under the direction of a neurologist, and only then when conditions had advanced to such a point that the diagnosis could be made beyond peradventure, though by this time, alas, in the presence of tumor, tension within the skull had become extreme. This made a procedure with inherent technical difficulties extremely hazardous, not alone, at the moment of its performance but the ensuing complications due to imperfect and hasty closures

4. There is, too, a surgery of the sympathetic nervous system, poorly developed it is true and hardly recognizable even in this its experimental stage. We have had glimpses of it in certain operations for goiter, in certain forms of treatment suggested for Reynaud's disease, and the proposals by Leriche, in regard to a purposeful surgical paralysis of the vaso-constrictor nerves which accompany the blood vessels, are straws to show the direction of the wind.

The influence of the vagus and the splanchnic nerves upon the viscera; the relation of emotional states to metabolic stability; Cannon's experimental anastomoses between phrenic and cervical sympathetic, with their remarkable sequel—these things indicate what may lie before us if imagination is turned to the application of some of the facts known to physiologists regarding the automatic nervous system.

3. One of his colleagues, indeed, at the National Hospital went so far as to make a study of the brain tumor cases operated upon there, and concluded that the average duration of life of patients thus afflicted was longer without than with an operation.

led with disheartening frequency to complications which sometimes prolonged an existence worse than the original disease.

The most crying need, therefore, in the early years of the century was for an improvement of our technical methods under the realization that what had sufficed for other organs and tissues when applied to the surgery of the nervous system was disastrous. Therein lay the failure of Agnew and von Bergmann.

Fifteen years ago we were scarcely at the dawn of an understanding of purposeful decompression for brain tumors. To be sure, the observation had been made and reported more than once that after an occasional osteoplastic exploration which either revealed no growth, or one supposedly unremovable, an entirely unexpected amelioration of subjective symptoms had taken place. However, inasmuch as most of these early operations had been confined to the more accessible central region of the hemisphere these subjective benefits were more than offset by post-operative paralyses from protrusion of the tense brain through the cranial defect. When the idea of a purposeful decompression over relatively "silent" portions of the brain, conducted, moreover, in areas like the temporal and suboccipital regions where an undue extent of protrusion is checked by securely closed extracranial muscles—when this idea finally took hold, the old explorations which had resulted in a certain measure or relief were resurrected and tabulated as decompressions in our modern sense, which they were not either in reality or intent.

With the development of a reasonably safe and satisfactory procedure for relieving tension both for cerebral and cerebellar lesions, and one which of itself did not lead to paralyses, these palliative operations began to multiply and it soon became apparent to all that the accepted views regarding the cause of what was called optic neuritis resulting in atrophy and blindness in tumor cases would have to be revised. For it was obvious that an inflammation of the nerve could not explain a process capable of being checked by the mere relief of pressure, so long as the tumor, to which the supposedly toxic neuritis had commonly been ascribed, remained unremoved.

Inflammations of the optic nerves due to toxic substances and capable of producing atrophy doubtless exist, but changes in the nerve head

observable to the ophthalmoscope are infinitely more often due either to an increase of cerebro-spinal fluid tension or to direct pressure on the nerve by tumors in the region of the chiasm than to any other cause—so much more often that rhinologists and ophthalmologists must needs pause before venturing to make the popular diagnoses of the day which lead so often to unnecessary operations on the accessory sinuses.

I cannot speak for others, but for myself the subtemporal and the suboccipital operations are, in the long run, the two most useful procedures in cranio-cerebral surgery though, as is true of all operations, they are by no means perfected and there are right and wrong ways of performing them.⁵

The *subtemporal decompression* I would place first on the list. It may be employed as a temporizing measure even in the presence of a localizable lesion, but it is of chief value in all unlocalizable cerebral tumors. Naturally, since the bone defect is made purposefully over the relatively silent temporal lobe, the growth may at times be unexpectedly disclosed. In the presence, moreover, of a questionable cerebellar lesion, the existing symptoms being hardly such as to justify the more elaborate and difficult posterior exposure, the measure may be used as an aid to diagnosis. For the existence of an obstructive hydrocephalus can be determined under these circumstances by a puncture of the temporal horn of the lateral ventricle, a matter of considerable localizing value though it is to be admitted that in the presence of a hydrocephalus a decompression over the cerebrum gives but slight pressure relief.

The routine operation which may be regarded as of second importance is the *combined osteoplastic exploration and decompression*. With the boneflap so placed that its base is in the temporal region, the squamous wing of the temporal bone may be rongeured away after the flap is reflected. Though surgeons in the past have sacrificed without hesitation large portions of the calvarium in eradicating tumors, and occasionally this may be necessary even now, yet it is highly

5. I would have felt ere this that the principles of a subtemporal decompression were so well understood that it was a safe measure in the hands of every general surgeon. but we still see so many sorry results of so-called decompression operations with bone flaps elevated in the region of the temporal attachment and often on the left side, that the happy time does not seem to have come as yet. A detailed account of the measure, long delayed in publication, has just appeared in the *Textbook of Surgical Diagnosis and Treatment*, by American Authors, Ed. by A. J. Ochsner, 1920, i, 407-448.

desirable that the cranial chamber should be kept as intact as one's skill and the conditions permit. It is also desirable for many reasons that an operation for tumor should be conducted whenever possible in a single session, and the old two-stage performances, provided there is careful blood-stilling, are less and less frequently called for.⁶

The third procedure, the *typical cerebellar exposure*, is a still more difficult operation and necessitates elaborate preparations and skilful team-work if a long series of these measures are to be carried through with a minimal mortality. In this performance the steps are practically the same, whether it resolves itself into a decompression or in the more or less complete removal of a tumor should one be disclosed. It is a long two-hour operation at best—an hour for the full exposure and another for wound closure—but when tension is great, when there is threatened respiratory difficulty so that a ventricular puncture in the course of the early stages is called for, or when there is a recess tumor which requires long and careful manipulations, or a tumor of the mid line which necessitates removal of the arch of the atlas and prolongation of the dural incision down over the spinal canal as far as the axis, the performance may well require an extra hour or two.⁷

Since the war, influenced by DeMartel's experiences as well as by our own, I have made a few of these cerebellar exposures under a local anesthetic, and though it is possible, I do not feel that I can do quite as perfect an operation in this way as when the patient is etherized, even though this in itself adds an element of

danger. Under a local anesthetic the long seance becomes still more protracted, and by the time the patient begins to ask if you are not nearly through one can hardly resist the temptation to exceed his established speed limit, to cut corners and thereby pave the way for accidents.

These then are the three standard types of operation, though there are innumerable modifications of them. Each surgeon in accordance with his particular training and tastes will have devices of various kinds to overcome difficulties as they arise. These technical idiosyncrasies do not affect the three main issues—the exposure of the lesion, its safe and proper handling, the painstaking closure necessary for a wound which may subsequently be subjected to considerable tension.

I have emphasized before, and must emphasize again, that there is no field of surgery in which fastidiousness is more essential to success. Imperfections in technique in the course of operations on other parts of the body where other tissues than those of the central nervous system are concerned may delay recovery but not necessarily impair an end result. But corresponding slips which compromise the function of the nervous system may sometimes leave mental disturbances or irrecoverable paralyses to which death is preferable.

The surgeon who feels a due sense of responsibility regarding these difficult cases and would reduce postoperative deformities and accidents to the minimum must often put all the reserve he has into a single operation. Without injustice to the patients more than one stereotyped measure like a trigeminal root avulsion or subtemporal decompression may be undertaken in a single morning, but in the case of the more arduous and uncertain procedures the physical strain and responsibility may be such that he would be foolhardy and negligent of his patients' welfare who would venture upon a succession of these tasks.

Then, too, there is no group of patients who require a more detailed preoperative study, in which I feel that the surgeon is obligated to engage, and this with attention to laboratory studies which, in a new specialty are particularly to be encouraged, is about all that can be properly attended to. It is not the number of cases operated upon which have made contributions

6. When a tumor extirpation is anticipated, as in the case of a large endothelioma, a two-stage operation admittedly continues to be often required for there is apt to be undue loss of blood during the elevation of the flap, and there is almost certain to be still more in a certain stage of dislodging the tumor. Under these circumstances I feel that a dural opening at the first session should be limited to the temporal region to allow a protrusion in correspondence with the subtemporal defect—in other words, with the area of bone rongueured away from under the temporal muscle. This will permit the upper portion of the flap to be replaced over an intact dura to await a second session, a certain measure of pressure relief being meanwhile secured. Should the dura be widely reflected at the first session and the tumor exposed with the inevitable protrusion of the hemisphere, this would make one of two things necessary—either an immediate attempt at tumor extirpation which might be more than the patient could stand, or stripping off the reflected area of bone and replacement of the scalp alone, a procedure which leaves an unnecessarily large cranial defect. One may be occasionally compelled by poor judgment or force of circumstances to accept one or another of these awkward situations.

7. A neurologist who recently had the endurance to see an acoustic tumor operation carried through on one of his patients to its conclusion with detailed wound closure, layer by layer, suddenly exclaimed: "I see now why my patients who have recovered heretofore after cerebellar operations have all had bulging necks. I had come to think it inevitable."

in surgery possible, but the detailed and careful analysis of the few, in conjunction with allied laboratory investigations.

Surgical technique may seem to be a thing entirely apart from the bedside study of patients preliminary to operation and from coincidental investigations in the laboratory.⁸ In a certain sense it is a thing apart and we are all familiar with men whose operative technique exceeds their judgments as to when it should be put to use. We have all known, too, surgeons who were somewhat awkward craftsmen but who possessed such a thorough knowledge of disease and its processes as to completely atone for their possible lack of manual dexterity. Of the two, the latter are often the more safe. Surgeons with both qualities highly developed are, alas, not a common breed. The patient, unfortunately, though he pays admission, has not the privilege of viewing the performance else he might like to see his appendix removed with a flourish and to applause. His active interest begins when the curtain falls and he is then apt to find himself more comfortable if the audience thought it a tedious and dull show.

In the manufacturing arts, particularly in this country of ours, subdivision of labor has developed to such an extent that no workman makes

a completed object. He may excel in the rapidity with which he may drive rivets, in the skill with which he may attach a given piece to an article, of whose remaining parts he has little knowledge and less interest. It is possible in this way, doubtless, to make a greater number of these articles and hence, if they are to be sold, to insure a greater remuneration for someone, but it does not add to the happiness or satisfaction of the artisans. On the contrary it deprives him of the supreme satisfaction of creating something from the bottom up in which though an artisan he comes to take artistic pride.

This is one of the underlying sources of the unrest and dissatisfaction of the laborer. There is something of this tendency in surgery today. Ten or more goiters or hernias treated, or appendices removed, in a morning is not an uncommon record, but none of them are completed in a thorough-going sense by one person—the chief surgeon may spend but a few moments at the task, the more essential moments to be sure—and it is remunerative, but it puts him on the basis of that form and specialist whose sole task is to give the final adjustment to the carburetor as a succession of newly-assembled motor cars pass him by. This, I do not believe, leads either to real satisfaction in one's professional work nor to the greatest excellence in its quality.

It was said of Godfrey Kneller who painted portraits innumerable that he only did the faces—others in his studio particularly skilled at portraiture of hands and wigs and gowns filled in the rest of the picture. The quantity was great and the canvases show it.

THE BRAIN AND ITS ENVELOPES

Tumors. I find that in the report of 1905 no mention is made of the number of cases which up to that time had been operated upon. There had been very few—twenty-nine to be exact—with no instance of a really successful tumor extirpation. The principles of decompression were under discussion and at the time it was the common practice of physicians with a brain tumor suspect—and the diagnosis was not often ventured upon—to prescribe a prolonged course of antiluetic treatment before considering an operation. It was not until two years later, be it remembered, that the Wassermann reaction was introduced, nor was it perfected by Noguchi till 1911; but even this did not entirely remove this

8. Though there may be differences of opinion in the matter, I, personally, feel that for the development of surgical technique no place is comparable to the experimental laboratory, and I feel that every young surgeon should begin to acquire his operative training in a series of operations on the lower animals. Certainly in the case of neurological operations one should learn on the lower animals the art of trephining, of the use of bone wax, of handling the cord and brain without the production of contusions and extravasations, of dealing with the cerebrospinal fluid which is the keynote of many intracranial operations. The most clever, neat and skilful of the younger generation of neurosurgeons in the country whom I have seen at work, have learned their surgery of the nervous system in this way. It has the double advantage of giving them a sufficient laboratory experience to enable them subsequently to pursue to the only place they are likely to be solved some of the many problems which arise. It was fortunate in my own case, and in that of my early co-workers in Baltimore, that the Hunterian Laboratory was available for this purpose. But with all this concerning the technique of operations we must not forget that there is a technique of examinations, and that a thorough, orderly and well conducted neurological study of a patient which demands the use of many instruments of precision necessary for tests of the special sense organs, is an art in itself. The examination of the eye is unquestionably the most important of all, and without the ophthalmoscope we would be quite helpless.

But in matters of localization the perimeter is of even greater value. In the series of papers (of which one or two are still to appear) on the Fields of Vision in Cases of Brain Tumor, published successively with Drs. George J. Heuer, James Bordley, Jr., and Clifford B. Walker we fell into an unquestioned error in relation to peripheral interlacing of the color fields. These observations were due to inexperience, and with the highly perfected methods developed by Dr. Walker corresponding field changes were no longer observed. They were due partly to an imperfect technique but more to erroneous interpretations of the responses of inattentive and easily fatigued patients. Naturally, therefore, color interlacing was found to disappear after operation.

Our faulty observation need perhaps not be greatly lamented for it unquestionably served to reactivate interest in perimetry which before that time, in clinics other than ophthalmological ones, was rarely employed and then only for gross defects.

source of delay, for as late as 1913, at the last International Medical Congress, Horsley felt impelled to urgently protest against this form of procrastination. There are other sources of delay which today must be combated but fortunately this one has been eliminated.

In the early days, though palliative measures brought temporary relief to many, actual recoveries after tumor extirpation were exceedingly few. There were many discouragements even on the side of the temporary alleviation of symptoms, for many patients were in the terminal stages, a large proportion of them blind, or so nearly so that blindness ensued despite a thorough decompression. Then, too, the conditions found at autopsy in fatal cases were such as to make it seem that if cures were ever possible they would certainly be so few and far between as to hardly justify the expenditure of such labor.

Curiously enough, looking back on this early series, the first two patients who appear to have been actually cured, if one may use this term critically, both had cerebellar gliomas, and were operated upon in 1908. One of them was a small boy of 13 years with a gliomatous cyst twice operated upon, the last time three years later with what appears to have been a successful destruction of the cyst wall. His functional recovery was perfect. He subsequently became captain of his school football team and now, nearly thirteen years later, is married, the father of a family, and regards himself as perfectly well. The other was a young man of 28, with a large glioma removed from the left hemisphere. Except for a slight impairment of vision in one eye on the recession of his choked disks, his recovery seems to have been complete, as may be appreciated from the contents of a recent letter sent me on the twelfth anniversary of his operation:

. . . "Being 39 years old, married and with two children beside other dependents, I did not feel as though I could be spared from home and so instead of enlisting in 1917, I went with the Bartlett Hayward Company who had contracts for making shrapnel shells. My particular work was making a part of the 155 mm. shell. I had to read micrometers to the one-thousandth of an inch, and if I had had to depend on my left eye I could not have done it, for it was already affected before the tumor was removed as your old charts will show, but the other is normal and good enough for two. I was able to stand the hard work with the best of them though I had the

'flu' and pneumonia, as did lots of others. . . ."

One would have thought that the initial successors would have been in extirpations of benign tumors like the endotheliomas or possibly acoustic neuromas. To be sure, the first reasonably successful operation for an acoustic neuroma—a case reported by Allan Starr—dates back nearly as far, namely to 1909, and though she remains reasonably well the degree of functional recovery is by no means perfect, for though these recess tumors are benign they present exceedingly difficult surgical problems.

Doubtless in the earlier series many endotheliomas were overlooked, for, concealed as they are apt to be between the hemispheres with but little surface evidence of their presence, they are difficult to expose—at least I can only account for their present proportional prevalence by this assumption. It was not until 1910 shortly before the reading of my second paper, that I had my first really successful endothelioma extirpation with a perfect result, in a man who since that time has taken an active part in national affairs.

Though in 1910 there were only 180 tumor cases in the series they nevertheless were beginning to appear in increasing numbers and have now become so many as to necessitate limiting the number under observation at a given time. All told, in the Baltimore series there were 330 cases up to the Fall of 1912, and since then the series of 735 cases observed at the Brigham Hospital to September 1st brings the number well above 1000. One hundred examples of a given lesion each year provides as much material as can well be studied, and one must check the tendency to accept more than can be digested. It was far easier to comment 10 years ago on 180 cases of presumed tumor than today upon 1000.

Brain tumors are common—far more so than I believed to be the case when this same statement was made 15 and again 10 years ago. The time has come when we can no longer afford to group them together as a class any more than we can group all abdominal tumors together and make a composite report upon them which is at all worth while. We must take tumors in certain situations or, better still, tumors of certain kinds in certain situations, and give them special study. I have attempted to do this in a monograph dealing with the acoustic neuromas of which

there have now been 45 verified cases, and feel that such a group-plan is the only way really to advance the subject. I shall hope ere long to follow it with a similar report on a series of some 60 verified endotheliomas which represent a particularly interesting type of intracranial tumor.

Tumor Classification. It is an Irishism to say that other conditions sometimes resemble tumor more closely than tumor does itself. I mean by this that some of our most favorable examples of tumor are ones in which the classical syntomatic triad of headache, vomiting and choked disk is completely wanting, though all three would doubtless have appeared in time. On the other hand, many patients are admitted to the clinic with a presumptive diagnosis of tumor, of the presence of which, nevertheless, we are often extremely doubtful despite the full-blown classical phenomena.

We have come therefore to classify the cases; I as *tumors certified* (or verified) only when the diagnosis has been confirmed and the type of tumor identified by histological examinations of tissue secured either at operation or autopsy;⁹ II as *tumors uncertified* when, though not histologically confirmed, the diagnosis is unquestionable; III as *tumor suspects* when it is a likely diagnosis. In this last group we keep a careful list also of a variety of conditions loosely designated as *pseudo-tumor*, (though not in the meaning of Nonne), comprising states, whether so proven or not, other than tumor but which have been sent to the clinic in view of a supposed tumor syndrome. The tentative diagnosis of some of these conditions, as other than tumor, may come to be verified subsequently at operation or autopsy, but mistakes in these borderline lesions are common and cases long classified as pseudo-tumor sometimes prove in the end actually to have had a tumor, just as an occasional patient with the diagnosis of 'tumor uncertified' proves in the end to be other than a tumor case.¹⁰

The following greatly compressed table will

9. We make one exception to this, namely, in the case of gliomatous cysts, the character of whose fluid contents in about 99% of cases serves to verify the character of the lesion.

10. This question of tumor classification I brought before the American College of Surgeons in an address last Fall, and it is a matter which Dr. Percival Bailey has elaborated in some detail in connection with the series of cases observed during his sojourn as my assistant. (ct. Archives of Neurology 1921)

show something of the numbers and give a general idea of the situation of the tumors in my complete series up to the first of September.

	Fore Brain			Pituitary incl'g Suprasellar	Hind Brain			Totals
	Certified	Uncertified	Suspects	Certified	Uncertified	Certified	Uncertified	
Baltimore Series	101	51	23	41	20	53	34	337
Boston Series	146	110	62	132	52	131	72	735
Totals	247	161	85	173	72	184	106	1072

It will be seen that out of 1072 cases classified in the tumor group, in 604 or about 60 per cent the nature of the tumor has been histologically verified. It would lead us too far in a general address to attempt a classification of these verified lesions or to tabulate them according to their anatomical regions, though in view of their group predominance the tumors of hypophyseal origin have been separately listed in the above table. We must concern ourselves on this occasion more with the surgical than with the pathological aspects of these conditions.

To give some general idea of the more strictly operative features of the work the following figures of a consecutive twelve months of service ending September 1, 1920, have been assembled for me. Out of 182 different patients admitted with a diagnosis of presumptive or possible tumor during this period the cross reference cards show that 54 were not operated upon.¹¹

The remaining 128 cases were operated upon in 160 sessions with 16 fatalities, giving an operative mortality of 10 per cent, a case mortality of 12.5 per cent, and a mortality of 15.5 per cent for the 77 patients for whom a tumor extirpation, partial or complete, was attempted. Considering the gravity of many of these procedures the percentage may be considered reasonably low but it is capable, I am sure, of being reduced by one half with earlier and more exact diagnoses.

11. These may be dismissed with the explanation, first, that three patients died shortly after entering the hospital, two of them with *tumor verified* at autopsy; second, that 23 are recorded as *cerebral* or *cerebellar tumor uncertified*, one of these the third of the fatal unoperated cases; third, the remaining 28 cases are cross-indexed as *tumor suspects* and represent a great variety of conditions with such presumptive diagnoses as encephalitis, arteriosclerosis, aneurysm, cerebral syphilis, and so forth. In this group of 28 there is only one case in which the lesion so far has been transferred from the tumor suspect to its proper group owing to verification of the lesion; a blind child with symptoms I had thought to be due to an infundibular tumor with hydrocephalus, but which proved to be due to a thrombosis of the superior longitudinal sinus.

TABLE OF OPERATIONS FOR 12 MONTHS ENDING
SEPT., 1920

Character	No.	Fatalities
<i>Forebrain:</i>		
Subtemporal decompressions (palliative)....	20	1
Subtemporal decompressions (disclosing tumor)	2	0
Osteoplastic exploration (cerebral).....	5	0
Osteoplastic exploration (with decompression)	24	0
Osteoplastic exploration (with total or partial tumor removal)	24	5
<i>Pituitary:</i>		
Transphenoidal (partial removal of tumor)..	20	1
Osteoplastic frontal exploration	8	0
Osteoplastic frontal exploration (total or partial tumor removal).....	7	0
Osteoplastic temporal exploration.....	1	1
<i>Cerebellar:</i>		
Suboccipital exploration and decompression..	25	2
Suboccipital exploration (with total or partial tumor removal)	24	6
	160	16

The following additional notes of the fatalities should be given. One of them occurred in the series of 22 subtemporal decompressions for unlocalizable tumors. No examination was permitted and the lesion therefore remains permanently not certified.

Of the 24 attempts to remove cerebral tumors when exposed by an osteoplastic cranial resection there were five fatalities, four of them in the endo-thelioma group, as follows: of the Gasserian ganglion, one; of the falx, one; of the mesial hemisphere, two, the death in one occurring several months after a total extirpation; in the other (an old man of 86 with epilepsy) it occurred from exhaustion due partly to a prostatic obstruction necessitating a supra-pubic operation. The fifth fatality in this group followed the extirpation of a large glioma.

Of the 36 pituitary, or attempted pituitary, exposures operated on by various routes, two patients were lost, giving a mortality of 5.5 per cent. One of the 20 transphenoidal operations, an advanced case of acromegaly, died in 48 hours (autopsy refused). There were no fatalities in the 15 transfrontal cases, but then, in a considerably smaller percentage in this than in the transphenoidal group was the operation successful in its purpose. The single attempt to deal with an interpeduncular tumor from the side was fatal, presumably from postoperative cerebral edema, a consequence of the dislocation necessary to secure a sufficient exposure.

Of the 25 suboccipital explorations for presumed cerebellar lesions the two deaths occurred in cases of mistaken tumor localization, one of them a child with secondary hydrocephalus due to a bilateral papilloma of the choroid plexus, the other in a patient with a large diffuse cerebral glioma.

Six of the 24 cerebellar cases succumbed after a more or less complete tumor extirpation; one of them three weeks after operation, following a fall causing contusion and hemorrhage; another a patient with an acoustic tumor who also had exophthalmic goiter and died of weakness on her 23th day; another an acoustic tumor extirpation with death from inhalation pneumonia on the 15th day. The fourth case died on the second day, of respiratory paralysis after a partial removal of a glioma from over the fourth ventricle; the fifth died suddenly on the third day, after a thorough evacuation of multiple cysts due to a

chronic arachnoiditis (pseudo-tumor, verified); the sixth case died six weeks after an apparently successful extirpation, intact, of a tuberculoma.

The highest mortality, therefore, in this 12 months' series was in the suboccipital group of 49 operations with eight fatalities, giving a 15 per cent mortality, or a 25 per cent mortality for the cases in which tumor extirpation had been attempted. In this particular respect the record for the 12 months was a bad one, but the high percentage is due to the inclusion of the three cases which died some weeks after the operation from causes not directly attributable to it. Were one justified in eliminating these three cases the mortality would fall one half, which is about where it should be.

Needless to say, in this entire series there has not been a single case of wound infection. One of my assistants, who had served in the hospital for over two years, had only seen a fungus cerebri in pictures until he went to France with our Hospital Unit and met with this condition for the first time in the cases of craniocerebral injury due to gunshot wounds.

Pituitary disorders. In my address of 1905 there is a foot-note to the effect that conceivably a diseased pituitary body might some day be successfully attacked. How little was understood of pituitary disorders at the time can be appreciated from the fact that not until a year later (1906) was the first example of an infundibular tumor recorded in the John Hopkins series, and though a diagnosis of tumor with hydrocephalus was made we had not the faintest idea of the location of the lesion. When this was disclosed long after at autopsy we had, even then, no inkling of the disturbances of metabolism the tumor had provoked.¹²

Today the diagnosis of so-called adiposogenital dystrophy, particularly when due to a suprasellar tumor, would be made at sight by an undergraduate, for the clinical aspects of pituitary insufficiency when once pointed out prove to be as striking as those of cretinism or myxedema. Chagrined as we were by this experience, it nevertheless served a good purpose since it made possible an interpretation of the experiments undertaken the following year in the Hunterian Laboratory with S. J. Crowe and John Homans. For in the course of some experimental canine hypophysectamies, the counterpart of these clinical states showing that they are due to a deprivation of pituitary secretion was unexpectedly hit upon.¹³

12. The case with one other was reported under the title "Sexual Infantilism with Optic Atrophy in Cases of Tumor Affecting the Hypophysis Cerebri." *J. Nerv. & Ment. Dis.*, Nov. 1906, xxxiii, 704-716.

13. Clinical Aspects of Hyperpituitarism. *J. Am. M. Ass.*, July 24, 1920, lili, 249-255.

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FEBRUARY, 1921

Editorial

THE DOCTOR NOT A VICARIOUS PHILANTHROPIST.

The attitude taken by the uplifters to the effect that men earning a salary more than equal to the income of the average physician should receive free medical treatment and even free care

in public institutions is ridiculous, and emphasizes a conclusion long since arrived at by the profession, namely: that the community is cheerfully and perhaps unthinkingly allowing the medical profession to do the charitable work which by right should devolve upon the community itself.

If an individual is not able to provide proper attendance then it is plainly the duty of the community to furnish it for him. The obligation to furnish such relief rests on the physician the same as on any other individual member of the community, but it should be met by the Doctor in the payment of exactly the same amount of taxes that is paid by every other citizen of the same degree of material prosperity and not by a special tax levied upon him as a professional man in the shape of unremunerated or gratuitous professional service.

Humanity will always claim sacrifice and will always get it from the medical profession, but it is not conducive to the welfare of the community that one element of the commonwealth should be systematically exploited for the benefit of the rest. It is right time public officials should realize that however convenient it may be to be charitable at another man's expense, the Doctor cannot live if he is to be regarded as a vicarious philanthropist.

The humanitarian instinct of the individual physician is constantly appealed to and we are proud to say never without response, but this does not mitigate the economic injustice perpetrated by the community in unloading its plain charitable duty on the medical profession simply because it has heretofore tacitly permitted it.

WISCONSIN GOVERNOR CONDEMNS UNITED STATES GOVERNMENT ATTEMPT TO SUBSIDIZE THE RESPECTIVE STATES.

We quote John J. Blaine, newly elected Governor of Wisconsin, as follows:

The federal government is undermining the powers of the State by "species of bribery." "The species of bribery" to which I refer consists of legislation by the federal government in making an appropriation for some purpose under conditions that the State meet the appropriation with a like amount. Some of the purposes are, no doubt, desirable, but to my mind in many

cases the State might better afford to embark upon the same undertaking independently, and by foregoing the appropriation made by the federal government actually carry out the same project more economically.

DOCTOR WRITE YOUR SENATORS AND
CONGRESSMEN AT ONCE OPPOS-
ING THE SHEPPARD-TOWNER
MATERNITY BILL NOW
IN CONGRESS

This bill is known as U. S. Senate Bill No. 3259. It provides for federal aid to the states in providing public money from the national treasury and a method of co-operation between the United States and states in supplying medical, hospital, nursing and obstetrical care at child-bearing. As there are two and a half million births annually in the United States, the ultimate cost to taxpayers will be enormous, possibly \$100,000,000 per year.

This bill is a menace and represents another piece of destructive legislation sponsored by *endocrine perverts, derailed menopausics* and a lot of other men and women who have been bitten by that fatal parasite, the *upliftus putri-faciens*, in the guise of uplifters, all of whom are working overtime to devise means to destroy the country.

As showing the dangers of the bill, we reproduce below some of the literature gotten out by the Massachusetts Civic Alliance, 50 Bromfield St., Boston, Massachusetts, a non-partisan organization.

When writing your Senator, Congressman and members of the Senate committee on Inter-State and Foreign Commerce, also the committee on Rules of the House of Representatives, Washington, D. C., you may use either the sample long form letter gotten out by the Civic Alliance or the short form gotten out by Dr. E. M. Stanton, Schenectady, N. Y.

The Civic Alliance for twenty years has favored good legislation, and now has the honor to urge upon you the necessity of opposing the subtle dangers in the Sheppard-Towner bill from the socialization of medicine to the injury of that science, of practitioners, of the home, of mothers and of the coming generation.

The appropriations in that bill practically bribe every State to plunge hastily into a new experiment, with ever expanding costs, that is almost communistic and

fatal to Americanism. Radical State laws are possible from hasty action.

While 35 governors, last May, endorsed the bill, yet at the December hearing, letters from only 8 governors were presented, showing the wave had receded. The Governor of Washington wrote: "I cannot possibly indorse the scheme."

About 1,000 Massachusetts doctors have filed vigorous protests with State authorities, and women's organizations are withdrawing their support.

Yours respectfully,

MASSACHUSETTS CIVIC
ALLIANCE.

MATERNITY BENEFITS, SOCIALIZED MEDICINE

Dr. W. A. Dolan, of Fall River, says: "Maternity Benefits is paternalism, communism, Sovietism, and all the other isms of the kind condensed into one.

"It is the entering wedge for all the various forms of compulsory insurance, such as Health, Old Age, Sickness, etc.

"It is the camel's head in the tent, soon to be followed by the rest of the camel.

"It makes the white man the equal of the Indian, a ward of the State.

"The State has as much right to pay my grocery bill as to pay that under discussion.

(Signed) "W. A. DOLAN, M. D.,

"Fall River, Mass."

MATERNITY BILL MOVING FORWARD

STRONG LOBBY WORKING FOR PASSAGE OF ACT FITCHBURG PHYSICIANS ARE OPPOSING

Public spirited women who seek the welfare of our home should consider the following special dispatch to the Fitchburg *Sentinel* of December 21, 1920.

There is danger lest the Maternity reform will yet succeed in placing American mothers and their children under departments of governments, where cattle are placed, and, in some respects, for the same purposes.

(From Our State House Correspondent)

BOSTON, Dec. 20.—In view of the strong remonstrance by the Fitchburg Medical Society and by the Worcester North District Medical Society against the maternity bills before the Massachusetts legislature, it seems to be their privilege to carry their activity to Washington. Mention in Washington dispatches of the work for this bill and the activity for it by Senator Joseph I. France, chairman of the committee on public health and national quarantine, calls attention to the effort against the bill by the Massachusetts Civic Alliance. Secretary Eben W. Burnstead of the Alliance wrote to Senator France about it, in common with other senators. The senator acknowledged receipt of the letter and said: "This bill was reported out favorably from the committee on public health and national quarantine on June 2 and is now on the Senate calendar. I assure you this measure has my support and

I trust it will receive favorable action in the present session of Congress."

Secretary Burnstead finds a strong lobby of women working for the bill. In a note to President-elect Harding in his capacity as a member of the committee which reported the bill, the secretary says that some who have given much study and thought to the maternity benefits propaganda to secure action by the government in regard to what ought to be done by individuals and is now being so done in the United States better than in any other country with an equal alien population, are deeply concerned about the bill. Attention is directed to Senator Harding's published statement concerning the duty of mothers, and the comment is made that he did not advocate the socializing of maternity, though Prussia and Russia have done it and the passage of the pending Senate bill will be an encouragement to the states to follow in that direction.

Mr. Burnstead says: "Prominent women in the League of Women Voters have never heard any word on the adverse side of the question. One of their public speakers called at this office today and so stated concerning herself. She had never thought of the control over women by the department of public health. That is a dreadful thing for sound, matured thought to forecast, in view of the failure of government control of airplane construction, shipbuilding and railroads." An appeal is made to "exert all proper influence to save our homes, mothers and children from coming under the control of the departments that now are limited in their exercise of control to cattle."

DOCTORS' PROTEST

MATERNITY BENEFITS NOT A PANACEA

Bills for Maternity Benefits come from an erroneous idea in the minds of some people, based upon questionable statistics, that the health of the American nation has gone far below the universal standard, and that prenatal and postnatal care is the sole panacea for all our evils.

We are tired of social reforms which are constantly being foisted upon us to cure us of what ails us when nothing at all out of the ordinary is the matter.

If the proponents are really in earnest in their endeavors to better the human race, the expectant mother and offspring, we would suggest that they devote the same amount of energy in advocating more religion, better morals, better habits, better protection by right dressing, better living and working conditions, less dancing, less theaters, more fresh air, less burning of the midnight oil, and many other things too numerous to mention. The results obtained would throw into insignificance the prenatal and postnatal proposition.

STATE CONTROL OF MATERNITY BENEFITS UNNECESSARY

We oppose these bills because they are unnecessary. We have at present laws upon our statute books and what is needed is to work out these laws to their fullest extent. Then if they are not sufficient, amend them or make new laws.

The State Department of Health has never been given more than advisory power. We have no objection to have that same power continued. The Force of Law has always been invested in the local departments of health. That is Home Rule, and we trust it shall prevail.

The very things sought are now in a measure being accomplished. Physicians, under the law, report all births as they occur. The local board of health then sends a visiting nurse or the district nurse to follow up the case and help the physician to give postnatal care. This costs the State not one penny. It would be an easy matter to extend the work and make it even more effective under the same mode of procedure.

Expectant mothers engage their physicians several months in advance. The attending physicians are thereby in a position to give advice and prenatal care. Here again it would be an easy matter for the physician, in conjunction with the local board of health and the visiting nurse to extend the work. The advisory function of the State department of health would here find a very useful and broad field of endeavor. Thus we oppose these bills because they are unnecessary, and the same results can be obtained without cost to the Commonwealth.

These extracts are from the protest of the Worcester North District Medical Society which was presented to committees of the Massachusetts Legislature of 1920 by A. H. Quessy, M. D.

MATERNITY PROTEST

MASSACHUSETTS PHYSICIANS OPPOSE BILLS FOR STATE MATERNITY AID

To the Honorable Senators and Representatives:

We ask from what source or sources comes the demand for Maternity Aid. Are the physicians asking for it? No.

To properly administer prenatal and postnatal care under state control, it would be necessary to establish a department and sub-departments with high salaried officers and sub-officers, hence we can understand why some specializing in obstetrics might favor these bills. We also believe it would be more fitting for the State Department of Health to be in a receptive mood rather than to advocate these bills before legislative committees.

IS THE DEMAND FOR MATERNITY AID STATE-WIDE?

No. Is organized capital demanding it? No. Is organized and non-organized labor voicing the expression of the rank and file for it? No. Are the women in this State clamoring for it? A few, not many.

Is it the women with large families, the real producers, who are seeking it? Or, rather, is it the childless or the unmarried women who, instead of reproducing, feel that they must devote all of their time and energy to their poor unfortunate sisters who are "doing their bit" to increase the number of American citizens?

These bills come from an erroneous idea in the minds of some people, based upon questionable statistics, that the health of the American nation has

gone far below the universal standard, and that prenatal and postnatal care is the sole panacea for all our evils.

THESE BILLS ARE NOT WHOLLY HEALTH MEASURES

We are told the bill is a health measure. That this legislation, if passed, will reduce defective population, and lessen the need for State care of the Insane, the Half-Witted, the Indigent, the Tubercular, the Blind, the Alcoholic, the Criminal, the Drug-ridden and all the others of the fifty-seven varieties. What a dream!

Do the proponents of these bills plan to undo by prenatal and postnatal care what has been brought upon us by years and years of wrong living? It is well to seek remedies for the above evils, but it is ridiculous to say that prenatal and postnatal care is the cure.

STATE MATERNITY A FAILURE

Australia has prenatal and postnatal care and it is admittedly a failure.

Germany, with her prenatal and postnatal laws, and all her other social laws, did not produce a super-man. She did produce a machine-man, a man State controlled. The State looked after the pedigree of his birth, controlled his education, regulated his habits, suggested his thoughts, etc., but he had no individuality.

His health was not superior. While the German machine was winning, the German super-man was at his best. When the machine began to lose, the super-man went to pieces. Having no individuality of his own, he had cultivated no thoughts of his own. His courage was gone. He had no initiative of his own. The super-man had proved himself to be the inferior man.

RADICALLY WRONG

Can it be that we were wrong in fighting for democracy in the face of so many late attempts to introduce autocracy? Control by the individual is democracy; control by the State is autocracy, or, in other words, socialism. This bill leads to control by the State, or socialism; socialism leads to bolshevism, and bolshevism leads to anarchy. We therefore oppose them because they lead the way to socialism and because they are radically wrong.

Physicians have been told that this legislation must go through and that it is better to steer it than to oppose it. The physicians of Worcester, Massachusetts, North District, believe that the Senators and Representatives are willing to listen to an honest expression of opinion. *We don't want to steer them. We don't want even to have them amended. We oppose them in toto because they are radically and wholly wrong and cannot be partially right.*

CAT IN A BAG

We oppose them because they are a step toward State control of the practice of medicine. They are "a cat in a bag."

You are asked to pass these bills which are not at all specific. The proponents cannot tell you how much it will cost to administer these laws; they cannot point

to good results obtained in any country; they cannot specify in what way they propose to employ physicians nor what remuneration they intend to give them for their services.

They cannot specify in what adequate way they intend to give nursing and expert prenatal care, or nursing and hospital care at the time of confinement, yet all these are called for but not specified in the bills.

GREAT COST UNNECESSARY

The very things sought are now in a measure being accomplished. Physicians under the law report all births as they occur. The local board of health then sends a visiting nurse or the district nurse to follow up the case and help the physician to give postnatal care. This costs the State not one penny.

Expectant mothers engage their physician several months in advance. He is thereby in a position to give advice and prenatal care. It would be an easy matter for the physician, in conjunction with the local board of health and the visiting nurse, to extend the work. The advisory function of the State Department of Health would here find a very useful and broad field of endeavor. Thus, we oppose these bills because they are unnecessary, and because the same results can be obtained without cost to the Commonwealth.

We oppose them because of the enormous financial burden upon the taxpayers. The price would be astounding and prohibitive. Just think of it—a very conservative amount for prenatal and postnatal care would be at least two million dollars, and that alone is the cost price of the newly-born. When the child is grown to adult life the State must again consistently finance the control of its health and working efficiency. And when old age has brought to an end his useful career, an old-age pension would be the next thing on the program. Death would come as a fitting climax, and the least that could be done would be to give him a decent burial.

All told, it is a simple problem of mathematics. If it costs two million for the birth of the State's children, how much would it cost by the time they were brought up, and then dead and buried? The answer would be millions and millions. Can the State afford it? No. Taxpayers could well object with righteous indignation.

FOUR MEDICAL SOCIETIES

The Worcester North District, after careful study, opposes these bills. So does the Bristol South District in a resolution following. The Franklin District Medical Society and the Fitchburg Medical Society oppose them, and I have no doubt other district societies.

The most important wheels of all this proposed new machinery are the physicians of this Commonwealth. They are the men upon whom you must depend; otherwise these bills would be useless.

Physicians are far from being selfish. Day and night they administer to the needs of the sick. The poor have always found the doctors their friends. Doctors have voluntarily co-operated in all measures which would really improve the general health and

prevent accidents, knowing full well that by so doing they were reducing their own source of revenue.

They subscribe to preventive medicine. They believe in it for the sake of humanity; but when it comes to handing over the practice of medicine to State control, the physicians of Worcester North District most strongly object.

PHYSICIANS OF WORCESTER NORTH DISTRICT AND
OF FITCHBURG MEDICAL SOCIETY,

BY A. H. QUESSY, M. D.

RESOLUTIONS PASSED BY THE BRISTOL SOUTH DISTRICT
MEDICAL SOCIETY (MASSACHUSETTS) AT THE
ANNUAL MEETING, MAY 6, 1920

"Resolved, That the Massachusetts Medical Society of the Bristol South District considers the passage, by State or Nation, of paternalistic laws as class legislation and an infringement of the rights of individual citizenship.

"It further considers as pernicious and unfair, and as tending to universal socialism, the passage of such laws.

"For these reasons, and for the further reason that it has at heart the best interests of the Nation and this Commonwealth, it opposes strenuously any legislation favoring so-called health insurance, compulsory or voluntary, in all its various forms, including the Maternity Bill now before the legislature."

64 Prichard Street, Fitchburg, Mass.

PHYSICIANS EXPOSE ERROR OF MATERNITY BENEFITS

A. H. Quessy, M. D., at the League of Women Voters, Winchester, Mass., January 6th, showed how the maternity bills are founded in error.

MATERNITY ERROR EXPOSED

He said:

"We differ with the proponents as to cause and treatment. These bills, when analyzed, infer two things: first, that poverty is one cause and the remedy is financial aid (cash benefits); and, second, that the practitioners of medicine are lacking in efficiency in the practice of obstetrics.

We repudiate both the cause and treatment, as set forth by the proponents, and we will proceed to show our viewpoint.

FIRST CAUSE—POVERTY

The Massachusetts Commission of 1920, that has investigated Maternity Benefits, finds that in a negligible number of cases there might have been true poverty, and, in consequence, recommends the elimination of cash benefits. Hence, there is no need to discuss this point further.

THE NEXT CAUSE—INEFFICIENCY OF THE PRACTITIONERS
OF OBSTETRICS

Is it not true that, during the last twenty years, medical training has improved greatly; good nursing has become general; hospitals have become more numerous and have excellent maternity wards; pituitrin has made instrumental deliveries much less common; surgical cleanliness has become universally recognized

and used by the profession; and physicians are as faithful as ever to their patients' welfare?

WHAT HAS BEEN DONE

Is it not true that medical educators, the State Department of Health, the local health authorities, nursing associations, child welfare organizations, women's leagues, and numerous other independent organizations, together with the co-operation of the physicians, have all been actively at work in the last few years to protect the health and life of the expectant mother and her offspring?

THE ABOVE FACTORS SHOULD HAVE DIMINISHED THE
MORTALITY

Yet statistics are quoted by advocates of State Maternity Benefits to make it appear that the rate has increased. If so, these methods have failed. Therefore, if mortality has increased, there must be other causes. Why, then, place all the blame on the physicians and health authorities, as implied in these bills?

It is unjust and unfair that medical educators, physicians, hospital staffs, and all other forces that have been doing so much for the prospective mother should be branded before the public of both state and nation as incompetents.

This arraignment of itself should be enough to dispose of these bills.

THE TRUE CAUSE

The question now comes: *What* is the true cause, and what is the right treatment for the alleged mortality?

Before stating our viewpoint of the cause, we will make a few statements.

WHY OUR MATERNAL DEATH RATE APPEARS HIGHER THAN
EUROPE'S

The recording of statistics more accurately in the United States than in many other countries has made our country to appear to have a higher maternal mortality rate. This apparently high rate of deaths of mothers is made to seem more manifest, in recent years, during which greater pains have been taken to secure reports with greater accuracy throughout an increasingly larger registration area.

MORTALITY OR MORBIDITY

There is a difference between mortality and morbidity. Mortality is the actual death rate. Morbidity is the quality of the disease, or the abnormal physical conditions which led to death. Just how many deaths were actually due to *mismanagement of obstetrics and how many were due more directly to the quality of the disease, or the morbid conditions in the child-bearing woman or the new child* should be stated before making a wholesale indictment of the medical profession.

CAUSE IS MORAL AND SOCIAL

We contend that the true cause lies in our moral and social conditions. We were created right, but have not kept ourselves right. Bad habits, wrong living, and, we might add, heredity, have brought about the physical defects which are giving the fatal results to child-birth.

The moral conditions in this country, as well as elsewhere, are deplorable. Ministers of all denominations are appalled at the lack of morality. Venereal diseases are affecting the health of manhood and womanhood.

Low conditions of immorality open the gates to all kinds of imperfections in social conditions. When morality is lacking, there is nothing to check the tendencies to follow fashion, regardless of the effect on health. These tendencies are seen in the ill-fitting corsets, which cramp the abdominal organs and push them out of relation, causing undevelopment and displacements; in the high heels, causing all kinds of orthopedic defects, as well as other defects due to posture, and in dresses that expose to the weather.

In addition, the tendency is toward pleasure-madness, which turns night into day, depriving future mothers of the fresh air, rest and sleep needed to renew expended energy lost in the toil of the day.

RESULTS

The result of all this is to lower the general health and powers of resistance. Girls arrive at the stage of motherhood weak, enemic, ill-nourished, nerve-wrecked, deformed, and utterly unfit to bear children. Woman cannot give to her child that which she has not. If she has good health, she may transmit good health. If she has good physique, she may transmit good physique. If she has not these, she will give the opposite.

Heredity plays an important part, and physical imperfections are handed down from generations, *which cannot be changed by prenatal and postnatal care. Physical conditions today are found in pregnancy that are hereditary as much as is epilepsy.*

LAW IMPORTANT

State Maternity Benefits will not prevent deaths or expectant mothers who have been made unfit by immorality, social excesses or heredity, and who constitute the great part of the half of 1 per cent of mothers who die from child-birth causes.

TREATMENT

Finally, as to treatment, we claim that existing agencies are saving lives of mothers and babies better than ever before, and the laws which exist cover the ground and need only to be worked out and enforced to their fullest possibilities.

We suggest one potent factor, and that is the proper education of the people to the correct habits of living.

To go farther than this is to invade the realm of private rights, personal liberties and constitutional safeguards.

SAYS WILL NOT IMPROVE OBSTETRICAL PRACTICE

Dr. James Lincoln Huntington,
311 Marlborough Street,
Boston, Massachusetts.

March 24, 1920.

Massachusetts Civic Alliance,

50 Bromfield Street, Boston, Mass.

"At the recent meeting of the Obstetrical Society of

Boston, the president, Dr. Franklin S. Newell, authorized me to forward you the following extract from our minutes:

"January 27, 1920, the following resolution was passed by a majority vote of the Society: '*The Obstetrical Society of Boston is opposed to the proposed legislation in regard to Maternity Benefits as not calculated to improve obstetrical practice in the Commonwealth of Massachusetts.*'"

"Very truly yours,

"JAMES LINCOLN HUNTINGTON,
"Secretary."

LONG FORM OF LETTER FOR YOUR SENATOR AND CONGRESSMAN

Dear Congressman, Senator, Etc.:

Governmental Maternity Benefit Bill is dangerous.

In only one-half of 1 per cent of all births is there any mortality of the mothers. The New York City Health Department says "much of this mortality is associated with criminal abortion." Shall millions be spent to save such criminals? Maternity Benefits cannot, in the few days of nativity, offset the errors of a lifetime.

Only force by the government can compel mothers to obey scientific laws. Yet, what man wants the government to control his wife?

The Sheppard-Towner bill is said to be non-compulsory. It starts the machinery. It opens the door to the enactment of compulsory measures by the States. Prussia and Russia have compulsory laws and woman is degraded in Russia.

The boll-weevil and cattle argument is misdirected. The appropriation is not for the hogs. It is for our homes, so that mothers and children may not die from eating diseased meat.

To say the government spends nothing for babies is slanderous. The hundreds of millions expended by Federal, State and Municipal governments for sanitation, hospitals, pure water supply, food inspection and in a hundred other directions, is to foster healthfulness and lives of mothers and their children from cradle to grave.

Many women fear what may result from the government getting its hand on women during the time of their dependency. Many national societies this year have refused to endorse government maternity. The General Federation of Women's Clubs, National Grange, I. O. O. F., Catholic Women, W. C. T. U. and others of note.

The Fall River News points out that men interested on the financial side are financing the propaganda.

The statistical arguments advanced give a wrong impression. Our people are heterogeneous, while the smaller countries to which the United States is compared are homogeneous. Considering that the United States, through private initiative, is doing obstetrical service for the mothers of the world, our mortality of mothers and babes is wonderfully low. Lower in some cities than anywhere on earth. New Zealand is one

of these homogeneous nations, but maternity is not socialized there.

Thanking you for the patriotic thought, we are sure you will give to saving mothers from humiliating subjugation to bureaus of government,

We have the honor to be,

Very truly yours,

Dr.

SHORT FORM OF LETTER

Dear Senator, Congressman, Etc.:

At the present time you and others are much interested in reducing Government expenses. In this connection I wish to call your attention to the "Sheppard-Towner Maternity Benefit Bill." Its name is alluring. Actually it will accomplish nothing but the creation of a lot of Government paid salaries and other expenses. After that it would take millions spent in investigations to find the least microscopic benefit to mothers or babies. As a practical solution of an ever present problem it is from the viewpoint of the Medical Profession quite preposterous.

Very sincerely yours,

Dr.

THE SHEPPARD-TOWNER BILL WAS REPORTED OUT OF THE
SENATE COMMITTEE ON INTERSTATE AND FOREIGN
COMMERCE, JANUARY 25TH

The following is the personnel of this committee:

John J. Esch, Chairman, 116 Todd Place, N. E., Washington, D. C.

Edward L. Hamilton, The Dewey.

James S. Parker, 1775 Massachusetts Avenue.

Burton E. Sweet, of Iowa, Washington, D. C.

Walter R. Stiness, of Rhode Island, Washington, D. C.

John G. Cooper, of Ohio.

Franklin F. Ellsworth, of Minnesota, Washington, D. C.

Edward E. Denison, of Illinois, Congress Hall.

Everett Sanders, of Indiana, The Bradford.

Schuyler Merritt, of Connecticut, 1822 Nineteenth Street.

J. Stanley Webster, of Washington, Arlington Hotel.

Evan J. Jones, of Pennsylvania, Washington, D. C.

Thetus W. Sims, of Tennessee, 2139 Wyoming Avenue.

Frank E. Doremus, of Michigan, 2802 Wisconsin Avenue.

Alben W. Barkley, of Kentucky, 1760 Euclid Avenue.

Sam Rayburn, of Texas, 2001 Sixteenth Street.

Andrew J. Montague, of Virginia, The Avondale.

Chas. P. Coady, of Maryland, Baltimore, Md.

THE BILL IS NOW BEFORE THE COMMITTEE ON RULES OF THE HOUSE OF REPRESENTATIVES, WASHINGTON, D. C.

The following is the personnel of the committee:

Hon. Philip P. Campbell, Chairman, House Office Building, Washington, D. C.

Hon. Bertrand H. Snell, 2400 16th Street, Washington, D. C.

Hon. William A. Rodenberg, 3501 Macomb Street, Washington, D. C.

Hon. Simeon D. Foss, George Washington Inn, Washington, D. C.

Hon. Aaron S. Kreider, Congress Hall, Washington, D. C.

Hon. Porter H. Dale, The Driscoll, Washington, D. C.

Hon. Royal C. Johnson, 3309 Seventeenth Street, Washington, D. C.

Hon. Thomas D. Schall, Berwyn, Md.

Hon. Edw. W. Pou, The Shoreham, Washington, D. C.

Hon. Finis J. Garrett, 1519 Webster Street, Washington, D. C.

Hon. James C. Cantrill, 1309 Kenyon Street, Washington, D. C.

Hon. Daniel J. Riordan, Washington, D. C.

The Congressmen can also be addressed at the House Office Building, Washington, D. C.

THE FOLLOWING IS A LIST OF THE REPRESENTATIVES FROM
ILLINOIS

United States Senators

Medill McCormick, Rep., Chicago. Term expires 1925.

William B. McKinley, Rep., Champaign. Term expires 1927.

Representatives in Congress

At Large—

Richard Yates, Rep., Springfield, Ill.

William E. Mason, Rep., 3314 Washington boulevard, Chicago, Ill.

Dist.

1 Martin B. Madden, Rep., 3829 Michigan Avenue, Chicago, Ill.

2 James R. Mann, Rep., 1614 E. 56th Street, Chicago, Ill.

3 Elliott W. Sproul, Rep., 9230 Pleasant Avenue, Chicago, Ill.

4 John W. Rainey, Dem., 3341 S. Western Avenue Boulevard, Chicago, Ill.

5 Adolph J. Sabath, Dem., 2006 S. Ashland Avenue, Chicago, Ill.

6 John J. Gorman, Rep., 1623 Jackson Boulevard, Chicago, Ill.

7 M. A. Michaelson, Rep., 3018 Palmer Square, Chicago, Ill.

8 Stanley Henry Kunz, Dem., 1916 Potomac Avenue, Chicago, Ill.

9 Fred A. Britten, Rep., 327 Belden Avenue, Chicago, Ill.

10 Carl R. Chindblom, Rep., 1744 Foster Avenue, Chicago, Ill.

11 Ira C. Copley, Rep., Aurora, Ill.

12 Charles E. Fuller, Rep., Belvidere, Ill.

13 John C. McKenzie, Rep., Elizabeth, Ill.

14 William J. Graham, Rep., Aledo, Ill.

15 Edward J. King, Rep., Galesburg, Ill.

16 Clifford Ireland, Rep., Peoria, Ill.

17 Frank H. Funk, Rep., Bloomington, Ill.

- 18 Joseph G. Cannon, Rep., Danville, Ill.
- 19 Allen F. Moore, Rep., Monticello, Ill.
- 20 Guy L. Shaw, Rep., Beardstown, Ill.
- 21 Loren E. Wheeler, Rep., Springfield, Ill.
- 22 William A. Rodenberg, Rep., East St. Louis, Ill.
- 23 E. B. Brooks, Rep., Newton, Ill.
- 24 Thos. S. Williams, Rep., Louisville, Ill.
- 25 Edward E. Dennison, Rep., Marion, Ill.

If doctors will write to these men great harm may be prevented; for it should be understood and remembered that the modified Sheppard-Towner bill holds out to the several State Legislatures the glittering bait of thousands of dollars if they shall initiate legislation carrying equal amounts of appropriations. The danger lies in the likelihood of hasty, ill-formed or radical measures being enacted in brief sessions on new subjects about which few persons understand very much if anything. "Jokers" may be inserted and errors creep into bills so framed that may do the cause of medicine and the practitioner great harm. Besides, women are subject to whatever laws are made.

**GET TOGETHER MEETING OF DOCTORS,
DENTISTS AND DRUGGISTS—TO
HOLD MASS MEETING TO DIS-
CUSS HEALTH INSURANCE,
STATE MEDICINE AND
ALLIED DANGEROUS
SCHEMES**

**ETERNAL VIGILANCE IS THE PRICE OF SAFETY—
THE MEDICAL PROFESSION MUST REC-
OGNIZE THIS TRUTH AND ACT
UPON IT IF IT IS TO SURVIVE**

As per resolution passed at the January meeting of the Chicago Medical Society:

Dr. Edward H. Ochsner, chairman of the committee on health insurance, called a conference (at the City Club, Chicago, January 21st) of a number of representative members of the medical, dental and pharmaceutical professions for the purpose of considering the advisability of holding a mass meeting of the three professions (as represented in Cook County) in order to discuss the dangers of compulsory health insurance, State Medicine and other socializing schemes which, if enacted into law, will seriously curtail the usefulness if not actually destroy all three professions.

At this meeting doctors, dentists and druggists were liberally represented.

Dr. Edward Ochsner was elected chairman and Professor E. N. Gathercoal of the American Pharmaceutical Association was elected secretary.

The conference agreed unanimously on the following program:

First, that a call be issued for a general meeting of physicians, dentists and pharmacists to discuss compulsory health insurance and allied forms of socialization of medicine.

Second, that the meeting be held at the regular meeting place of the Chicago Medical Society (Marshall Field Annex), 25 East Washington St., Chicago, Wednesday evening, February 23rd, at 8 P. M.

Third, that John J. A. O'Reilly of Brooklyn, N. Y., an expert on medical economics, be invited to address the meeting.

Fourth, that representatives of pharmacy and dentistry also appear on the program.

Fifth, that Dr. Geo. M. West, member of the State Committee on Legislation of the Illinois Dental Society; Mr. Isam M. Light, secretary of the Chicago Retail Druggists' Association, and Dr. H. J. Achard, editor of Clinical Medicine, be associated with Chairman Ochsner and Secretary Gathercoal on a committee to complete arrangements for the meeting.

Doctor, don't miss this meeting.

Come and learn how a combination of doctors, dentists and druggists defeated thirteen out of thirteen vicious medical bills introduced into the New York Legislature last year.

Also learn how the New York doctors, dentists and druggists defeated 23 candidates for the Legislature who expressed themselves in favor of health insurance.

RESULTS SPEAK LOUDER THAN WORDS.

The work of the contract practice committee of the Chicago Medical Society is attracting nationwide attention. This committee has been able through a campaign of dignified publicity to bring corporations, insurance companies and firms to a realization of the fact that medical men are entitled to compensation in keeping with the character and responsibilities of the services rendered.

The following case is typical of scores of others that have been settled in full since this committee began work three months ago.

CONTRACT PRACTICE COMMITTEE

This correspondence is published to demonstrate what united action can do.

March 10, 1920.

Dr. Foley:

I am enclosing three letters received from Hartford Indemnity Co. relative to services rendered an employee of Rothschild & Co.

This party, Jim Dominco, had many bruises and abrasions of head and body to which I attended but his main injuries were an almost complete severing of left external ear from head and multiple scalp wounds. I worked nearly two hours upon him in my office putting twenty sutures in ear and eventually got a perfect result. I also treated same at their request ten times after rendering first aid and sent in a bill for \$25.00 first aid and \$10.00 for subsequent treatments.

I later deducted \$5.00 from bill. The enclosed letters will speak for themselves. I have been unable to collect any of this bill as they informed me after returning from service that the account was off their files.

Hoping this may at least be some help in your investigations.

Very respectfully,
A. W. HAEFFNER
Chicago, April, 26; 1920.

Jim Dominco,
Rothschilds & Co.,
Dr. A. W. Haeffner, Dr.
To Professional Services,
1917 Feb. 24—first aid and 20 sutures.....\$25.00
(Partially severed ear and multiple scalp wounds)
Feb. 25, 26-28, Mar. 1-3-5-7-9-11-13 subse-
quent treatments 10.00
\$35.00

April 14th, 1917.

Dr. A. W. Haeffner,
4022 W. Twenty-second Street,
Chicago.
Dear Doctor: Re: 105963C * Rothschild & Co. *
Jim Dominco *

We are in receipt of your bill in the sum of \$35.00 for services rendered the above named injured. We notice that you charged \$20 for sutures. In our opinion this bill is rather high. We believe that \$20 would be a fair charge for your services. If you will kindly fill out the attached final report, and revise your bill, so as to comply with our figures, we shall be pleased to forward draft.

Yours very truly,
PAUL P. MEYERS,
Claim Department.

POM*R.

Dr. Haeffner,
4022 W. 22nd Street.,
Chicago.

Dear Doctor: Re: 105963C * Rothschild & Co. *
Jim Dominco *

We are in receipt of your revised bill in the sum of \$30. We are still of the opinion that your bill is too high. You will notice that your first aid charge including the charge for sutures is \$20. We do not wish to arbitrarily fix the charges of a surgeon, nevertheless, we are of the opinion that the Industrial Board would not approve a charge of \$30 in this case. We would, therefore, kindly request that you reduce your bill as suggested in our letter of April 14th.

Yours very truly,
GEO. H. MOLONEY,
Claim Department.

POM*R.

May 12th, 1917.

Dr. A. W. Haeffner,
4022 W. 22nd Street,
Chicago, Ill.

Dear Doctor: Re: 105963C - Rothschild & Co.
Jim Dominco - 2-24-1917 -

We are in receipt of your letter of the 9th inst., stating that you will refuse to accept our offer for your services in the above matter.

We must respectfully decline the payment of your bill and request that you forward same to the injured man who has now decided to proceed against the owner of the truck which caused the injury.

Yours very truly,
ATTORNEY.

POM R

The Committee considered the charges fair and wrote Mr. R. J. Folonie as follows:

April 22nd, '20.

Mr. Robert Folonie,
Chicago, Ill.

Dear Sir: At a recent meeting of the Contract Practice Committee it was voted to engage you to enter suit against Rothschild & Co., whose insurance was carried by the Hartford Accident and Indemnity Co. on behalf of Dr. A. W. Haeffner, 4022 W. 22nd street.

The expense is guaranteed by the Committee, as a special appropriation has been secured from the trustees.

Will you kindly communicate with Dr. Haeffner direct?

We enclose all correspondence in this claim.

Sincerely yours,
Chairman Contract Practice Committee.

January 3, 1921.

January 3, 1921, the following letter was received:

Dr. Thos. P. Foley,
Chairman Contract Practice Committee,
Chicago Medical Society,
25 E. Washington St., City.

Dear Doctor: Re: Dr. A. W. Haeffner vs. Rothschild & Co.

We are pleased to advise that Dr. Haeffner's claim for \$35 has been collected by us from the Hartford Accident & Indemnity Company, the Insurance Company, and their draft is enclosed with this in the amount of \$38, \$3 of this represents costs which I paid in the Municipal Court to start the suit and the other \$35 belongs to Dr. Haeffner. I will include the \$3 in my bill to you so you should get it from Dr. Haeffner when you deliver this draft to him. The Doctor is also to sign the enclosed release in the presence of two witnesses. I should like to have that as soon as possible so I can deliver it to the Insurance company.

Very truly yours,
ROBERT J. FOLONIE.

HF*LG.

The individual physician might not be able to get action but a real organization can.

DR. THOMAS P. FOLEY, Chairman,
Contract Practice Committee.

MICHIGAN DOCTORS THREATENED WITH ANNIHILATION

PRACTICING MEDICINE BY UNIVERSITY A REAL
MENACE. HOSPITAL ESTABLISHED TO TREAT
THE INDIGENT ONLY CHARGES FIFTEEN
HUNDRED (\$1,500.00) DOLLARS FOR
OPERATION AND IN ADDITION
PATIENT WAS USED FOR
CLINICAL PURPOSES

On January 13 President M. L. Burton of the University of Michigan called the physicians of the state into conference at Ann Arbor to ask them if it would be proper for the University to engage in the private practice of medicine. According to the staff correspondent of the *Detroit Journal* and the *Detroit News* five hundred physicians from all parts of the state responded and said "No" in very emphatic fashion. We are reliably informed that the University of Michigan learned the sentiment of the profession if that was what they were looking for. It is interesting to note that Dr. Walter Vaughan, son of V. C. Vaughan, was the only spokesman for the scheme.

The session lasted three hours and was heated

at times. There were many charges hurled at the University authorities of failing to cooperate with the practicing physicians and the actual proselyting of patients on the part of the staff. It also was claimed that patients were being charged exorbitant fees as private patients and being used for clinical purposes also.

Dr. Hugh Cabot, of the hospital staff, admitted, in answer to a question by Dr. J. B. Kennedy of Detroit, that one man paid \$1,500.00 for an operation and was used for clinical purposes before the students.

We are informed by doctors present at the meeting that the report of Allen Schoenfield of the staff of the *Detroit News* is quite full and very accurate. We quote him as follows:

SAY UNIVERSITY HOSPITAL WOULD COMPETE WITH PRACTICING PHYSICIANS OF STATE

If the State of Michigan, through its new University Hospital, intends to enter into competition with the general practitioner, it will do it only after one of the bitterest fights in the history of the medical profession has been fought and won.

This much was evidenced Thursday afternoon when, in response to the invitation sent to members of the State Medical Society by Dr. Marion LeRoy Burton, president of the University of Michigan, 600 physicians gathered at the Michigan Union clubhouse. The meeting was called ostensibly to obtain advice relative to the formation of an operative plan for the University Hospital; in reality, it turned out, to gain the sanction of physicians throughout the state to the plan formulated by Dr. Burton in collaboration with the present hospital staff.

The plan was stated by Dr. Burton, who acted as chairman of the meeting. Thereafter the deluge.

BURTON SCENTS STORM

White-haired practitioners rose, one after the other, to denounce the scheme in terms tinged with every acid radical in the pharmacopeia. Dr. Burton had asked for an expression of opinion. He got it. The getting, however, involved a ruffled temper, a sharp passage at arms with Dr. Harold Wilson of the Wayne County Medical Society, and a display of oratorical fireworks unusual to the profession.

Dr. Burton had begun by saying it could not be hoped that all present would agree on everything. A university medical school, he said, had three important functions: To teach medicine to the younger generation and to aid the graduate practitioner; to pursue medical research; to care for patients.

He reviewed briefly the performance of these functions by other schools of medicine in the past. He pointed out the inefficiency of the "part time plan" which employs instructors sometimes with no salary, sometimes with a small pittance, generally with a

teacher's usual salary, forcing these men to look to actual practice at the same time, for a livelihood.

He then discussed the so-called "academic full-time plan" employed by Johns Hopkins University and by the Washington University of St. Louis. This plan, he declared, sought scientists rather than clinicians, who were to devote their entire time to the work and receive their entire income from the hospital. But, he said, cases were studied under such a plan, rather than the needs of sick and suffering human beings. It failed to recognize medicine as an art, holding it a pure science.

Instead, Dr. Burton offered, as a concrete plan for the University Hospital which would, he hoped, serve as a starting point for discussion, a scheme which he termed "the group-medicine full-time plan."

This, he stated, chose as clinician a man of ripe clinical experience, known for the things he had actually accomplished. The primary interest of such a man, he said, must be science and education rather than the amassing of wealth. Such a man, he said, must command the respect of the medical profession. He must receive his entire professional income from the university, which would guarantee him a minimum income, probably about \$15,000 a year.

"The hospital under such a plan," said Dr. Burton, "would become a place where human beings would be taken care of, but not to the entire disregard of research. There would be no private patients for any member of the teaching staff. All fees would be used for the maintenance of the hospital and staff. It would support investigative science. It would receive all kinds and types of people, for the interne and the doctor must come in contact with all kinds of people. *He who is used to attendance only on the indigent and the pauper has not the proper air and manner, perhaps, to serve others with the greatest success.* When the state is good enough to provide a hospital, it should be available to all.

NOT STATE MEDICINE

"Of course there are arguments against such a plan. I will anticipate them. It is said it makes the University Hospital compete with the practitioners of the state. But only in a fair and limited fashion.

"It is said to be an effort on the part of the university to get more patients. But the present hospital now has a waiting list of more than 200.

"It is said to be intended to lead to state medicine. It is not. The University Hospital staff and officials have gone on record as disapproving of such a plan. It is put forward as a plan to enable the avoidance of state medicine. The University of Michigan believes in the open competition of free individuals as medical practitioners."

Dr. Angus McLean of Detroit, president of the State Medical Society, rose to express, he said, the general sentiments of the body he represents. He objected to the levying of taxes for the support of a University Hospital and the taking of fees as well for the same purpose.

"If the state," he said, "is willing to spend a large

sum to erect such an institution, why not put it nearer the center of population? Why put it in Ann Arbor? If there is to be a market for medicine, why not do it where the marketing is good?"

Dr. Burton sought to reply to the objections.

Dr. A. M. Hume of Owosso, member of the State Board of Registration, got the floor.

"The medical man is a producer of public service," he said. "And he should be paid for that service if it is of the highest quality. The people of the state have established here a center for medical education. It was never intended that it should enter into medical service."

Dr. Burton interrupted. "But what would you do with the two bills on the statute books requiring the treatment of patients by the university?"

"I would have them repealed," said Dr. Hume.

BAKER CHARGES ABUSE

Dr. Scott Baker of Bay City, former president of the State Medical Society, declared that if his associates were to tear down Dr. Burton's plan, they must also be prepared to build up a better. He believed, he said, that the University Hospital had a dual function—to train the medical men of the future and also to act as a clearing ground for the practitioner in the field, aiding him in his diagnosis of baffling cases, helping him by means of modern and improved laboratory methods and apparatus.

"You say there are 200 on the waiting list. *Yet I am told that it is possible for a patient to have an operation performed the day of his arrival in Ann Arbor if he has the money.* The hospital is overcrowded, to be sure, but someone quietly tips him off that Dr. So-and-So of the University Hospital medical staff has a little private hospital in town where for \$300 or so an operation can be performed at once. This is an abuse which ought to be stopped.

"You say you haven't been able to get men of the proper caliber to come to your hospital for what you are able to pay—so you resort to the expedient of giving him \$5,000 for filling a particular chair in your medical school, \$5,000 more for clinical work, and now you want to hold up the people so as to give him another \$5,000."

Dr. Baker suggested that treatment be restricted to indigents for clinical material and that the support of a proper medical faculty come from a slight increase in the mill tax.

TIBBALS ALSO HITS PLAN

Dr. Frank B. Tibbals of Detroit seemed, by the applause that attended his remarks, to voice the sentiments of many when he declared that university faculty men had got to thinking all the facilities for the practice of medicine were vested in Ann Arbor.

"*Your treatments ought to be limited to the care of indigents and to those specifically sent by family physicians. Of course you can make your hospital pay by competing with us. But why not go farther; I have no doubt your engineering department can turn out automobiles, which could be sold to the people of*

the state at reduced cost. Your pharmacy department could make money if it competed with Detroit's largest drug firm. Your legal department could support itself if it induced the public to come to Ann Arbor to make their wills, draw up deeds, carry on litigation. If you compete with the medical profession by 'charging what each patient can pay'—why not compete with every other kind of business?"

WILSON LOOSENS FLOOD

Dr. Wilson tore loose the flood-gates.

"I do not think it necessary to tell us," he said, "that there are two kinds of patients—indigents and human beings—"

Dr. Burton rose. "Do you mean to tell me you think that is what I said?" he snapped.

"Didn't you say that the doctor who is used to pauper practice isn't fit to come into your home? Didn't you—"

"I did not."

Dr. Wilson turned to the stenographer, but continued instead, in response to cries of "Go on!"

"I grant there is advantage in group-medicine," he said, "but it works just as efficiently with the indigent as with those capable of paying, as well with one patient as with the 1,200 you are planning for. I tell you that private practice has been encroached on many, many times by the University Hospital. You have included things in your plan to which medical men will never agree and no amount of presidential diplomacy will make them agree."

\$1,500 FOR AN OPERATION

It was evident from Dr. J. B. Kennedy of Detroit, who followed Dr. Wilson, that merely the first ripple of the tidal wave had passed.

He endeavored to show by questioning Dr. G. C. Parnall, superintendent of the present University Hospital, that the university had used only a small fraction of the money allotted it by the state last year to support the institution, the rest of the sum of disbursements being met by patients' fees.

"There is a rumor afloat," he said, "that a patient was operated on here the other day and was charged \$1,500. Is that true?"

Dr. Parnall admitted it was.

"Now then, where did that \$1,500 go?"

Dr. Burton replied: "To the University Hospital."

"So then you are in competition with the medical profession?" asked Dr. Kennedy.

"To a limited extent," said Dr. Burton.

"Well, \$1,500 makes it look as though the sky were the limit," Dr. Kennedy retorted. "I was going to perform a certain operation yesterday. But before the hour set I was told my patient had come here to Ann Arbor and was in the hospital here. Now, how did she get in? She isn't an indigent, for I was going to charge her \$200—and I, as her family physician, didn't send her.

"Maybe I'm a trifle sore about that \$200. I've just paid my state and county taxes and I needed the money."

"Now see here," said Dr. Kennedy. "Young men come to this university to get a medical education. They get it and go out into the state to practice. And then the university comes along and takes their patients away from them—and charges \$1,500. Why, all of us would rather have our taxes increased to pay your hospital faculty than have our patients taken away from us."

"The man who paid \$1,500," Dr. Burton retorted, "is paying quite a bit in taxes, himself."

The operation alluded to, it was stated afterward by a physician, had been performed by him at Grace Hospital in June in just 15 seconds and he had often done it in 12.

"It is essential for the success of the plan that patients pay in accord with their ability to do so," said Dr. Burton, in reply to a question, then, advancing before the table behind which he had been sitting, he said:

"This afternoon, for the first time in my life, I have had my integrity questioned."

Dr. Wilson was on his feet. "If you mean—"

"Sir, I have the floor," Dr. Burton insisted.

"But may I speak?"

"No, sir! I just want to say that I have never before made any living person think I am dishonest, for I respect every living person as well as myself. Now, Doctor?"

Dr. Wilson assured Dr. Burton that no offense had been meant, that up to a certain point those present were heartily in accord with him.

VAUGHAN BOOSTS PLAN

Dr. Burton replied that intimation had been made that in the statement of his plan he had not laid all the cards on the table and that he had withheld from consideration some of the strongest objections to it. He declared it had not been his intention to do so.

Dr. Walter Vaughan of Detroit, son of Dr. Victor C. Vaughan, dean of the medical school, in closing the discussion, declared he would like to see the plan advocated by Dr. Burton put into execution.

He said he would like to see the plan go farther and have the University Hospital act as a supervising hospital for every similar institution in the state.

A suggestion was made that a committee be appointed consisting of members of the University Hospital.

NOTE: It is very evident from Dr. Burton's remarks that he thinks clinic work alone might not give one the grand manner so necessary, it seems, to being a first class physician. We have never heard anything quite so snobocratic in our life. Dr. Burton's stand on what constitutes a real physician is unique in many respects. What about the dear people now for whom they shed tears? A physician of uncertain manners is good enough for him, but really, Deah Boy—when it comes to "my family," well, we want kulture with a big "K."

NOW STOMACHS ARE TO BE STANDARDIZED

CAN YOU BEAT THIS FOR MATERNALISM AND
PATERNALISM? AND THE HEALTH COM-
MISSIONER NOT EVEN AN M.D.!

Mr. Vaughan, lay Health Commissioner of Detroit, Michigan, rules that mothers are to be prosecuted unless they heed advice:

If mothers, rich or poor, persist in starving their children by improper feeding, despite the intensive educational campaign launched by the city, charges of wilful negligence will be laid against them, the department of health announced today.

"But the legal action will be used only as a last resort," said Henry F. Vaughan, health commissioner. "We will send out 60 nurses to conduct a house-to-house educational campaign to check malnutrition. If this effort, and others already made, does not succeed, the prosecutions will follow."

Physical examination of 100,000 school children, which is proceeding at the rate of 500 a day, shows that parents generally have ignored dietetic recommendations made to them personally a year ago, the commissioner said.

WEALTHY GUILTY, TOO

"In many cases it may be due to poverty and ignorance, but we find that many children of wealthy parents are suffering from the same disease," Mr. Vaughan asserted.

Sixty medical examiners of the board of health, working in public and parochial schools, today reported to Commissioner Vaughan that of the 1,000 children examined, 10 per cent are from 15 to 25 per cent underweight.

As a result, the Northville summer camp for undernourished children will be enlarged to accommodate 250 children, Commissioner Vaughan said. If parents refuse to allow their undernourished children to attend the camp, the children will be taken in charge by the board of health, he intimated.

MANY UNDERWEIGHT

Medical examination of school children began Monday, following measuring and weighing of the children by board of education officers. Reports to the board of health showed that nearly 25 per cent of those examined were underweight, when age and height were taken into consideration. The board immediately ordered its medical examiners to classify children according to nationality and heredity. Hundreds of cases of anaemia and listlessness were traced to mal-nutrition.

Examination of school children will not be completed for two weeks, according to George T. Palmer, epidemiologist of the health board.—*Detroit Free Press*, January 19, 1921.

Relative to the above meeting the Wayne County (Detroit) Medical Society passed the following resolution:

The undersigned delegates from this Society to attend a conference called by the medical faculty of the University of Michigan, beg to offer the following resolution as part of their report:

1. That any plan or intention on the part of the authorities of the University of Michigan to construct and use any part of any university hospital for the treatment of patients able to pay for medical or surgical services, meets with its entire disapproval.

2. That to charge patients in the University Hospitals or any other State hospital or institution, for medical or surgical services rendered to them by employes of the State is a dangerous and vicious proposal and should meet with no approval from any social group in this commonwealth.

3. That it is the opinion of this society that a high standard of medical education can be secured and maintained in the University of Michigan both in its class rooms and its hospitals by means other than those that are now proposed by its faculty, and in such a way as to be to the advantage of both the medical profession and the community itself.

(Signed) J. B. Kennedy,

Geo. E. Frothingham,	Walter J. Wilson, Jr.,
R. L. Clark,	J. H. Dempster,
Charles F. Kuhn,	Frank B. Walker,
Max Ballin,	Harold Wilson,
James E. Davis,	E. H. Sichler,
Angus McLean,	F. B. Tibbals,

DOCTORS AND DENTISTS!

Feeding Europe's starving children is an economic, as well as a humanitarian measure. It behooves us to keep these countries from complete demoralization.

We cannot delay.

Hungary, Austria, Poland, Germany, Czechoslovakia, Roumania, Transylvania, and Jugoslavia are facing famine!

Of every dollar you give, 97½ cents goes into food and medicine; \$10.00 keeps one child alive until the next harvest.

Can you eat in peace while children starve?

Please make checks payable to Gen. Chas. G. Dawes, Treasurer, and send to European Relief Council, 205 North Michigan Ave., Chicago (Marked for Physicians and Dentists Division.)

NOTE: If you have a local or county organization, make your contribution through the chairman. If not, send direct to headquarters.

THE GROWING ENSLAVEMENT OF THE MEDICAL PROFESSION.

The *Medical Record* of January 1, 1921, under the head of "The Growing Enslavement of the Medical Profession," has this to say:

"Who is to blame for the ever-increasing interference with the liberty of medical practitioners? If the medical societies of the land—county, state and national—were conducted as they should be and exercised the influence that they readily could if their officers in general were more alive to their responsibilities, possibly a halt might be called to this meddling by politicians and cranks with the practice of medicine."

THE HEALTH CENTRES BILL OF 1920*

STATE MEDICAL LEGISLATION

ITS EFFECT UPON THE PUBLIC AND THE PROFESSION.

A SYMPOSIUM.

Read before the Medical Society of the County of New York, December 29, 1920.

EDWARD LIVINGSTON HUNT, M. D.

In my address tonight I will try to analyze the Health Centres Bill of 1920.

This Bill was called An Act to Amend the Public Health Laws so as to provide for residents of rural districts, for industrial workers, and for all others who cannot otherwise secure such benefits, adequate and scientific medical and surgical treatment, hospital and dispensary facilities and nursing care, to assist local medical practitioners, and in general to improve the health of the inhabitants of the state, by authorizing a County, City or Health District to create and maintain one or more health centres, to provide state aid for same and make an appropriation therefor.

The bill in substance provided for the formation of health centres. The Board of Supervisors of any county could establish a health centre, which would serve the whole or part of the county. The plan was optional. The details were as follows—the erection of hospitals, the formation of clinics for out-patients, clinical, bacteriological, X-ray and chemical laboratories; the establishment of public health nursing service, and headquarters for all other public health, medical, nursing, and welfare agencies of the district; co-operation with the State Department of Education in securing proper medical supervision and medical inspection for school children; periodical medical examination of such inhabitants of the district as desired it.

The location, site, plans, and initial fixed equipment of the centre would be subject to the approval of the State Commissioner of Health. The Board of Supervisors, when they had decided to establish such

a health district, would have certain powers which would be to purchase or lease real property, to enter into contracts, to cause to be assessed, levied, and collected such sums as they might deem necessary, to accept and hold in trust for the county any grant or devise of land, and to appoint a Board of Managers of the Health Centre, which should consist of eight members, including the Commissioner, the President of the Board of Health, and of the other members at least one woman and two duly licensed physicians.

Their powers would be: to appoint a Superintendent, to fix the salaries of the Superintendent, to exercise general management and control of the said health centre, grounds, buildings, offices, attendants, physicians, employees and inmates thereof; to make such rules and regulations as advised by the Medical Board as being necessary for the study of the nature and cause of death in cases terminating fatally; to make rules and regulations regulating the fees to be charged for all medical and surgical services, to fix the salaries of attending physicians, and to make rules and regulations for the carrying into effect the purposes of such health centres; to erect all additional buildings; to employ within the limits of its appropriation public health nurses; to appoint a Medical Board; and to appoint and employ, after consultation with the Medical Board, all members of the medical, surgical and laboratory staff of the Health Centre.

The Superintendent of the Health Centre would be the executive officer subject to the Board of Managers, and to the approval of the State Commissioner of Health. His duties would be to equip the Health Centre, to have general supervision, to appoint any other employees, to cause proper accounts to be kept, to receive, subject to the rules and regulations, into the Health Centre, any person in the health district who might be in need of medical or surgical care, irrespective of whether such person could pay for the care. He would also cause to be made such inquiry as he might deem necessary as to the ability of each patient to pay for his care and treatment.

The bill stated that any physician attending any patient prior to such patient's admission to the hospital or the Health Centre should be allowed, if the patient so desired, to continue such treatment while the patient remained in the hospital.

In the cities the bill provided that the Mayor appoint the members of the Board of Managers of such Health Centre, and that the Board of Health of such city, if there should be one, should be appointed as now or hereafter provided by law.

The state, through the Legislature, should provide the following aid: For the construction and equipment of hospitals, one-half of the cost thereof; a grant of 75 cents per day for each free patient maintained in any hospital operated as a part of such Health Centre; a grant for the establishment of each out-patient clinic; a grant towards the ordinary current expenditures for free treatment; a grant of one-half of the actual cost of maintenance of the laboratory or laboratories of health centres not in excess of \$3,000

*Reprinted from the New York State Journal of Medicine, January, 1921.

per annum for each laboratory, and of \$1,500 toward the initial installation.

The work of all health centres, including the hospitals, clinics, laboratories and so forth, should be inspected and standardized by the State Department of Health, and all the state grants herein provided for should be paid only on the written approval of the State Commissioner of Health, after inspection of such centre. Provision should be made by the State Commissioner of Health for occasional or periodical consultations and clinics at the health centres by specialists in medicine and surgery.

Persons able to pay in whole or in part for such services would be charged a reasonable sum therefor, and the sum so received would be paid into the treasury of the Health Centre. It was not intended that this arrangement should in any way affect the private relation which might exist between the patient and his own physician who might bring him to the Health Centre.

This is as short a summary of the Health Centre Bill of 1920 as I can make in eight minutes. This measure is dead and not now before the Legislature. We have been given to understand, however, that a measure similar in principle but differing in detail will probably be presented to the Legislature at the coming session.

There are many arguments in favor of this measure, and there are many arguments against it. It seems to me that there are three big questions which at once present themselves and which ought to be decided by you. (1) Will this legislation affect the community favorably or adversely? (2) Will this legislation affect the medical profession favorably or adversely? (3) Assuming that the two conflict, what is your duty as a medical man?

The arguments in favor of the bill are:

(1) The conditions which exist, which will be told you probably by one of the later speakers.

(2) The tendency which the measure affords toward advancing group medicine and making progress in medicine.

(3) The benefits to the community.

(4) The fact that some sort of legislation will be enacted under the heading of Health Centre legislation, due to the conditions, the demands of the people, and the activities of the State Department of Health.

(5) The fact that such legislation would probably stimulate the profession, and, so its advocates maintain, educate the rural physician.

(6) The prestige which the enactment of a progressive measure will afford to the State Department of Health.

The arguments against this bill are:

(1) Too much power is given to the laity and too little to the medical profession.

(2) Too much power is given to the County Boards of Supervisors and the Mayors of cities, which may make for political graft.

(3) Too much power is given to the State De-

partment of Health. It may be well enough to give such powers as this bill confers to the present State Department of Health, but how about a different and inefficient commission? Is it wise to give such powers to any department?

(4) Too little recognition and power is given to the medical profession. Too much political control over the doctor is given to the elected official, the Supervisor and the Mayor.

(5) It is a step towards centralization of government and paternalism. That is doubtless a tendency of the times, but is it not akin to government ownership of railroads?

(6) It is a measure which, to a great extent, tends to or does deprive us of our liberties. It is an entering wedge toward state medicine. It may not be state medicine, but it is *county* medicine.

(7) It is unfair inasmuch that if Dr. Jones is connected with a health centre and Dr. Brown is not, Dr. Jones will receive certain advantages of prestige and financial emolument, which will not be open to Dr. Brown, as it will advertise the one and condemn the other to obscurity.

(8) It puts a large number of medical men on a salary, and so does away with, or deprives them of, initiative and individualism, and must to a certain extent in that way lower the morale of the medical profession.

(9) It cannot command the best talent in the medical profession. The state never can command the best that is in the state, because the state will never pay the rewards which the individual will. No state or government ever has secured the best, except in the emergency of war.

(10) And finally, it is an additional burden to the taxpayer.

NEED OF HEALTH CENTRES*

ELEN V. DELPHEY, M. D., CHAIRMAN

Committee on Compulsory Health and Workmen's Compensation Insurance Committee, Medical Society, County of New York.

From time to time, various and sundry amateur and professional uplifters have endeavored to prescribe for the political, industrial and bodily ills of mankind, and not infrequently their prescriptions are based either upon an inaccurate and incomplete investigation of all the facts in the case with a resulting inaccurate diagnosis of the underlying pathological condition, or upon an incomplete appreciation of the collateral effects upon not only those whom they wish to assist but also upon those whom they wish to assist them. In endeavoring to arrive at a proper conclusion as to the desirability of any proposition for the betterment of mankind, it is absolutely necessary to very carefully consider and weigh all the facts in the case, their relation to each

*Read in the "Symposium on State Medical Legislation. Its Effect Upon the Public and the Profession," at the Regular Meeting of the Medical Society of the County of New York, December 29, 1920.

ether and to the surrounding elements of society; the nature and variety of the employment, the income, the mode of living, sanitation, environment, cost of food and clothing, medical attendance, drugs and medicines, the amount spent for these and other luxuries, for extravagance, for dissipations—mild, such as the movies, or more serious as for alcoholics, for irregularities such as gambling or immoralities. Until such a complete survey has been made, it will be utterly impossible to absolutely determine the need of the proposed measure. In making such a survey, it is imperative that the surveyors shall be thoroughly competent for the purpose—that they shall be those with the inclination, training, and capability for the work and not as was the case a few years ago when it was proposed to utilize fourth-year high school students in making a sanitary survey of the West Side. In medical matters, it is necessary that the surveyor shall be a broad-minded, ripened and experienced physician in order that he may be capable of determining and weighing all the facts and of ascertaining whether or not the person is really in need of medical care and whether he will accept it, or whether he prefers to depend on home-treatment, quack medicines, "New Thought" or on "Christian Science." In promoting the propaganda for health centres, these conditions do not seem to have been fulfilled. Moreover, the propagandists seem not to have been able to appreciate the fact that prevention is better than cure; that their Utopian schemes are not calculated to prevent the incidence of disease which they want to relieve after they have already occurred. The sun, as he goes his daily rounds does not look down upon a race which has not been sorely tried by impractical experiments to uplift and reform. From the beginning of time, all men have had a willingness, if not an ambition, to help the poor and needy. But they usually prefer to help someone at a distance—like sending red flannel shirts to the Hottentots of Africa—and not to help those nearby; to attend to some other work and not to the work for which they were constituted and created. But the poor have not been helped; on the contrary, we are all being constantly and needlessly oppressed. Millions willing to work and care for themselves have been impoverished and pauperized, cruelly, needlessly, and wickedly by those who have pretended, and sometimes honestly, to want to help them.

The researches of your committee have shown that while the number of physicians in the rural districts is less than formerly, this change is due to the rural physicians moving to the cities and towns, because there they can more easily earn a reasonable living without such an immense expenditure of energy and vitality, and because there are fewer recent graduates going to the rural districts. These results are due to the more strenuous life of the medical practitioner in the rural districts; the question of fees and collections; and to the fact that the true physician goes to see a sick person whether he can pay or not. The lessened number is also due to the law of supply and

demand and whether the person demanding is willing to pay a reasonable price for the supply. The spreading abroad of the fact of the lessened number of physicians in the rural districts is due to the desire of the amateur and professional uplifters to arouse the enthusiasm and support of those who have been deemed to be "amiable weaklings in business matters, easily gulled by piteous tales and flattering remarks about the magnanimity of the profession," and thus to inveigle them into supporting an impracticable and dangerous scheme. The general medical practitioner is the most altruistic person on the face of the earth—he is constantly striving to get and to keep his patients well and to thus lessen his own income. This is after he has entered into the practice of his profession, but the average man is by nature concerned primarily and chiefly in those things which pertain to his own personal advantage. Almost no one, except the theological student, goes into a profession purely and solely "for the glory of God and the benefit of mankind," and if the obstacles to the successful practice of medicine are increased by such schemes as compulsory health insurance, health centres, and state medicine, the quality of the men who will choose the medical profession will be materially reduced and when that happens the whole people will suffer from their inefficiency.

In the reports received in response to our circular letter, your committee has found that on the average there are $2\frac{1}{2}$ hospitals in each county and that these have the confidence and support of the people; that the people in the rural districts get their physicians more easily, and the physicians to their patients more easily, except when confronted by the deep snows of winter, on account of the use of automobiles and the "state roads" throughout the state. The majority of cases do not need the so-called advantages of "group medicine" nor of hospital treatment. All they need is a good, clean, well-lighted and well-ventilated room, good medical attention, and someone who is gentle, kind, neat, and fairly intelligent to take care of and to wait on them. All of these can be as well obtained in the rural districts as in the most aristocratic city hospital where the expense per capita of keeping the patients is higher than it would be in the highest priced hotel in New York City. Moreover, even if it were necessary to have all the highly-qualified specialists specified in the propaganda for health centres, where would they be able to get real and not pseudo-specialists? Would they be made overnight as it is reported some of the specialists in this city are? Again, would the specialists agree on the diagnosis and treatment? If not, what sort of a predicament would the poor man be in? Suppose the ophthalmologist insisted that he had oculomotor imbalance and must have his muscles cut; the rhinologist, that he must have his tonsils, adenoids and turbinates removed and his ethmoids curetted; the dentist, that he should have all his teeth extracted; the otologist, that he should have a mastoid resection; the gastro-enterologist, that he should have

the "cobwebs in the attic" removed; the abdominal surgeon, that he should have a gall-bladder resection and his appendix taken out; the urologist, that he should have an operation on his prostate and his "calibre" dilated; the proctologist that he should have his hemorrhoids removed and perhaps the lower end of the intestine resected. "What would the poor man do then?" Fortunately, he is not a woman, for if the gynecologist got hold of him, the Lord only knows that the end would be." "Group medicine is not all it is cracked up to be." One of our most honored members, recently deceased, told me of a patient who came to his office, after having been to one of the highest priced diagnostic clinics and where she "took the whole course," and informed him that they told her that "her condition was due to some as yet unidentified germ circulating in her blood."

The business of government is not to make men or to cure them, but to give them a free chance to make themselves, to take care of themselves, and to choose their own method of being treated when sick. That was the spirit on which this government was founded. That was the practice which developed the American pioneer and which distinguishes him from the European peasant. Individualism develops a breed of strong, self-reliant free-men. Socialism is simply a crutch for the half-free, half-dependent, or wholly dependent. The demand for it in America has grown in direct proportion as a number of unassimilated aliens has increased. Educated and coerced into the belief of the super-state, always subservient to some one, always dependent upon someone they conceive government to be omnipotent for good or for evil, and so they are easily led by agitators and demagogues in and out of office, and who are always seeking to increase their power—and their income.

The highest degree of civilization is not indicated by the city having the greatest number of hospitals, almshouses, and insane asylums; not the one having the greatest, but the one having the least need of them.

The State Department of Health was constituted for the following purposes:

- To supervise the sanitary engineering of the state,
- To investigate the causes of diseases,
- To prevent the spread of contagious and infectious diseases,
- To collect vital statistics,
- To educate the public in matters pertaining to health,
- To supervise child hygiene,
- To supervise public nursing,
- To supervise the tuberculous.

Therefore, its purposes being prevention, it can best accomplish the purpose of its creation by performing and adhering to these duties. The most injurious influences affecting the physical condition of young children arise from the habits, customs, and practices of the people themselves rather than upon external surroundings or conditions. The environment of the infant is its mother. Its health and physical fitness are dependent primarily upon her health, her capacity

for domesticity, and her knowledge of infant care and management. The causes of infant mortality are: Defective sanitation, bad housing, overcrowding, insufficient nutrition of the mother, want of lactation, improper feeding, material ignorance of what is proper care, and hereditary vice; but the principal operating influence is the ignorance of the mother, and the remedy is the teaching of the mother. These duties properly belong to the Department of Health and if thoroughly and properly attended to will leave much less to do in the way of curing disease after these same children have grown up and have become adults.

Of late years there has been too great a tendency to "put it up to the government" and too little to the person himself—the socialization of everything. Every attempt at nationalization including our own during the World War, has resulted in inefficiency and decreased production. Have not our own personal experiences proved this? Have we forgotten the government control and operation of railroads, telegraphs and telephones? Is it not only recently that the telephone service has approximated in efficiency the standard set before the war? If we are to have governmental or state control, where are we to stop? Inasmuch as more than half of the ills of mankind are due to his eating, shall we have government control and operation of all the eating places? Shall we have institutions telling us where to eat, what to eat, when to eat, how much to eat and how to have it cooked? Shall we have public restaurants providing food without cost to all whether they can pay for it or not? Shall we have the same conditions regarding our clothing so that we shall be ordered what to wear and when we shall wear it? Will the clothes be furnished free? Do you think it will make women's skirts any lower at the bottom or any higher at the top? Shall we have our games, entertainments and outings supervised and regulated by some supervising agency which thinks it can best apportion them to our needs? Finally, shall we have our ideas and religion supervised and regulated by public agencies? Where then will be the boasted freedom of our country of which we are so proud? Is it not about time to call a halt to all these socialistic schemes? Is not the greatest efficiency through self-interest? Are not these simply the desires of someone to "put over" schemes for "fat jobs" or are they merely the maundering expression of the weak and incompetents to directly or indirectly get something for nothing?

"What is a socialist? One who has yearnings
For an equal division of unequal earnings;
Idler, bungler, or both, he is willing
To chuck in his kopeck and gobble your shilling."

The State Department of Health has been holding itinerant health clinics in various parts of the state, and the newspaper report of one held at Goshen states: "In the majority of cases the diagnoses of the local physicians were confirmed." (New York Times, Sept. 12th, 1920.) That being the case what was the

need of these "health clinics?" I wish to most emphatically register my protest against the idea that the country physicians are the ignoramuses which so many of the city residents are so fond of assuming. On the contrary, they are at least equal to, if not more competent than the average city physician. They may not know so much about any one specialty but they have some knowledge of all the specialties and are better grounded in all-round medical practice. Being compelled to depend upon themselves, they have acquired a better understanding of the diseases that occur in their locality and how to treat them. Robert Koch, the discoverer of the tubercle bacillus, was an obscure country physician; and I am creditably informed that the "Mayo Brothers," referred to in the State Department of Health's propaganda letter, were never even hospital internes, but they settled in a small country town and have been the cause of its great growth on account of their success and fame. Moreover, this was done without any subsidized "health centres" and was due entirely to skill and genius of these same country practitioners.

In conclusion: There is no need of "Health Centres" as outlined in the Sage-Machold Bill introduced into the State Legislature in March of this year; but there is a great and crying need for further means of educating the public in the care and feeding of children and in matters pertaining to sanitation and to the prevention of disease and these are a part of the functions and duties of the Department of Health.

"Better put a strong fence at the top of the cliff
Than an ambulance down in the valley."

"'Twas a dangerous cliff, as they freely confessed,
Though to walk near its crest was so pleasant;
But over its terrible edge there had slipped
A duke, and full many a peasant;
So the people said something would have to be done
But their projects did not all tally,
Some said: 'Put a fence round the edge of the cliff';
Some: 'An ambulance down in the valley.'

"But the cry for the ambulance carried the day;
For it spread through the neighborhood city;
A fence may be useful or not, it is true
But each heart became brimful of pity
For those who slipped over the dangerous cliff;
And the dwellers in highway and valley,
Gave pounds and gave pence, not to put up a fence
But an ambulance down in the valley.

"For the cliff is all right if your careful, they said,
And if folks even slip and are dropping,
It isn't the slipping that hurts them so much
As the shock down below—when they're stopping.
So day after day, as these mishaps occurred,
Quick forth would these rescuers rally,
To pick up the victims who fell off the cliff
With their ambulance down in the valley."

Apply this to health centres:

Better keep them all well than cure them when sick,
For the results of experience are thrilling,
To cure up the sick is good, but it's better
To prevent the people from illing.
Better stop the cause and source of infection,
Than add more men to death's rally;
"Better put a strong fence at the top of the cliff,
Than an ambulance down in the valley."

134 W. 71st Street,
New York City.

THE STATE BOARD OF HEALTH*

HERMANN M. BIGGS, M. D.

New York State Commissioner of Health, New York City.

In coming here tonight I had expected only to speak if the opportunity arose. Dr. Rose, who was down to read a paper, has been taken ill this evening, so I came in his place.

I want first to express my approval of the very excellent résumé by Dr. Hunt of the Health Centres Bill, and the impartial way in which he considered it. I think there has been a great deal of misconception, as is usual in regard to any new measures of this sort. The question is as to what it would do.

The way this bill came to be drafted is as follows: When the Public Health Law was revised in 1914, the Public Health Council was created, and to the Public Health Council, among other powers, was granted the power to determine the qualifications for health officers, sanitary supervisors, public health nurses and other public health officials. One of the first actions of the Public Health Council was to establish certain minimum education requirements for health officers; they provided that all health officers appointed after that time should have had a certain minimum education, amounting to a six weeks' course, practically, in public health, and through the efforts of the Public Health Council provision was made at Columbia University, Bellevue Hospital Medical College, Albany Medical College at Albany, Syracuse Medical College at Syracuse, and the Buffalo Medical College in Buffalo, for giving these courses to public health officers. Since that time more than six hundred of the little over one thousand health officers we have in New York State have taken these courses, but when we came to the enforcement of these regulations one of the first and most insuperable stumbling blocks we found, was the fact that in many municipalities there was only one physician, and that this one physician was the health officer; and then we found further that many of these health officers were already far beyond the age limit. The Public Health Council had fixed an age limit of 65; physicians over 65 years of age were not to be eligible for appointment as health officers. But we found that in a large number of municipalities there was only one physician, and

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in many more the one physician was over 65 years of age.

And then came the poliomyelitis epidemic of 1916, and then the influenza epidemic, and the war; and the demands which came to the Department of Health for medical assistance and nursing assistance from all quarters of the state, were so numerous and so urgent that first in 1916 and then again in 1918 the Governor authorized the expenditure of \$50,000 by the State Department of Health, directed the Comptroller to borrow this money, and authorized the expenditure of this under the direction of the State Department of Health, to provide medical service and nursing care in various municipalities of the state, where these were not available.

And then we made a further study of the situation, and found that the drift from the country to the city had affected not only the rural population, the lay population, but had affected the medical population to a still greater extent; that in many localities, where there had formerly been two or three physicians, the younger men had left; many of the men that went into service, when they returned from the service did not go back to the country where they had lived before, but having left the country and had something of another kind of life and association with their confrères, they were unwilling to go back to the country, and they want to the cities. And we found that the demand for medical service was more insistent and more widespread than ever.

We then made a census of the physicians in practice in twenty rural counties of the state. First we made a survey of Livingston County, which is a typical rural county of the best type. It is a very rich farm country, and was formerly a very fashionable county; Geneseo, as many of you know, is there. In that country we found there were fifty-four physicians in practice. Of these fifty-four physicians only five had entered the practice of medicine or entered the county within five years. Some of those who entered the county in that five years had been in practice for many years before. But the average period of practice of the fifty-four physicians in that county was twenty-eight years. You will see what that means. The whole fifty-four physicians in that county had been in practice on an average twenty-eight years. That means, of course, that the physicians on an average in that county were over 50 years of age.

The data of the American Medical Association has shown that the average life of the physicians of the country is about fifty-nine years; fifty-nine and a fraction. It means, in other words, that a large percentage of the physicians in Livingston County will have retired or have died within the next eight or ten years. This was the first county that we studied.

Then we made a survey of all of the rural counties of the state, all of the counties of the state in which there is not a city, and, taking all the rural counties of the state, we found that the average duration of practice of all the physicians in all the rural counties was over twenty-five years, and that less than three

per cent of the physicians in these rural counties had entered practice within the last five years.

There have been sixty-eight municipalities in the state which have appealed to the State Department of Health within the last two years, to provide medical care because they had none. It was not that they had inadequate care, but because they had none. While the population of the rural counties has increased a little in the last twenty years—it is about four or five per cent—the total number of physicians in practice has decreased about 15 per cent, and these for the most part are the physicians who have been in practice there, who were in practice there previous to fifteen years ago. In other words, before the advance in the requirements for medical education. When I graduated in medicine all that was required was two courses of lectures of four and a half months each. There were no preliminary requirements for the study of medicine; any one could study medicine; only two courses of lectures of four and a half months, and registering with a physician for three years, was required. Now instead of that, as you know, there must be at least two years preliminary to the study of medicine, and four years in medical school of at least eight months, and practically every man who graduates in medicine must have a hospital training. As a matter of fact, I think 97 per cent of the men graduating from the medical schools in New York State do have hospital training.

You know very well that after men have spent these seven or eight years in preparing themselves for the practice of medicine, they will not willingly cut off from association with their medical confrères. Now, mind you, that is the first thing, they are absolutely cut off from all association with their medical confrères. In the second place, they have absolutely no laboratory facilities of any kind. Those are the objectionable features. It is not that they do not make a good living; as a matter of fact, they do extremely well, they do far better relatively than a large number of the men in the cities. But a man who has been properly trained and had hospital service will not go willingly into the practice of medicine of twenty-five or thirty years ago.

Just think for a moment what it would mean, if you were cut off absolutely from all kinds of laboratory service and X-ray service. If you were cut off from all association with your colleagues, from all assistance from specialists, and you were left to practice everything—every specialty in surgery, medicine, gynecology, obstetrics and everything else. In other words, you would be going back to the practice of medicine exactly as it was twenty-five or thirty or forty years ago.

Now, that is exactly what the practice of medicine is in the rural districts of the state. I doubt if there is any one of us who would undertake this work; I am sure I would not. I would not be willing to go

into one of these rural districts and undertake the kind of work that those men have to do. They have to have a breadth of knowledge and a familiarity with all sorts of things, which none of us could have. But you cannot do the kind of work which modern medicine presupposes unless you have the opportunities and facilities which modern medicine involves; and that is what they lack. There are something like twenty-seven counties in the state where there are no laboratory facilities at all; and in the others to a large extent, excepting where there are cities of considerable size, the only laboratory facilities available are those which are furnished by the public health laboratories, and they are confined to the diagnosis of diphtheria and tuberculosis; chiefly those, most of the Wassermann tests and other work being done at the laboratories which the State Department has. It was the discovery of this situation which led us to think more seriously about these conditions.

Further than this, we find that not only is there lack of physicians, but there is lack of nurses. You cannot get nurses, they are not to be had. We have increased the number of public health nurses in New York State, outside of New York City, in the last six years from about 75 to nearly 1,100; there are nearly 1,100 public health nurses in the state now outside of New York City, but we have had the greatest difficulty in getting them. These are nurses who are employed by the local communities and by the counties, by the local Boards of Health, or in some instances by the Red Cross Chapters or by other voluntary organizations, but they are all doing public health nursing.

But when it comes to getting nurses for private duty in rural districts it is almost impossible to do it, and if they can be obtained the cost is beyond the reach of most of the people. You know that now our nurses in the city are getting \$5 or \$6 a day, and many of them are unwilling to do more than twelve hours' service. In serious illness they are not willing to do more than twelve hours' service. That means that the nursing costs \$10 or \$12 a day, besides the board of the nurses, and when that is added to the cost of medical supplies and so on, it is entirely beyond the reach of the average resident of the rural districts. In other words, the demand for hospital facilities is becoming greater and greater.

And that has been still further emphasized and intensified by the fact that domestic servants are not to be obtained at all. You know somewhat of the difficulty of obtaining domestic servants in the city, but when you go into the smaller cities that is enormously increased, and when you go into the rural districts there are none at all; and so when an individual becomes seriously ill in the rural districts there are no domestic servants, there are no nurses, and the doctor is eight or ten or twelve miles away, and you can imagine what the condition is.

It was this situation which brought us to the con-

sideration of this bill. The Health Centres Bill as it stands, I drafted; I take the full responsibility for it. It was then submitted to the Public Health Council, and modified in various respects, and as thus modified it was presented to the Legislature.

I want it quite clearly understood that this is not primarily public health legislation. I did not regard it so and do not regard it so, and have never regarded it as such. There is a part of it which is public health legislation; it refers to the creation of health districts. The health districts may be the same as the health centre district, if the local authorities so decide, and there can be appointed a health officer over the local district, and a Health Board may be created for this district. It may be a county or it may be a part of a county. And in that sense it is a public health measure.

The measure also provides that for the local health officers and health officers in the local districts, a certain compensation shall be provided by the state. These health officers in many of these districts get \$50 to \$100 a year; they get 10 cents per capita. They get \$50 to \$100, or \$150 to \$200 a year. And the only reason they got that is because in the Public Health Law we introduced the provision that the minimum compensation of a health officer should be not less than 10 cents per capita of the population served, and the next year a bill was introduced in the Legislature to repeal that, and we had the most bitter fight we have had since I have been in the State Commission of Health on that question, of the repeal of that provision of the Public Health Law which provided that the minimum compensation should be 10 cents per capita.

This bill increases this per capita allowance by 10 cents, the state paying 10 cents, so that the per capita allowance in the smaller municipalities would be 20 cents instead of 10 cents, as it is now. In that sense, so far as that is concerned, it is a public health measure. The other provisions are not primarily public health provisions at all, but it is an attempt to provide medical service in the state where it is now wanting.

I just want to say one or two things more—and in that sense I am not interested in it excepting as I am interested in a general way in public welfare. We were discussing this the other night at the Harvard Medical Society, and Dr. Dadmun spoke of a certain doctor coming in to his church where a man was preaching. On the request to remain, he turned to his friend and asked, "How long has he been preaching?" The friend said, "He has been preaching thirty years." "Well," replied the doctor, "in that case I think he won't go on much longer, and I think I will stay." I thought that particularly pat, because I have been in public health almost thirty years, and I won't stay much longer, I don't think. So that as far as I am concerned it does not concern me primarily or particularly.

But I do want to emphasize one or two things

strongly. That is, that the medical profession has been very unfortunate, I think, in the general attitude which it has taken. Perhaps you do not remember it, but I remember seven years ago speaking at a meeting in this hall, when you were discussing the supervision of venereal diseases, in which three or four papers were read attacking the action of the City Board of Health with reference to the supervision of the venereal diseases. I remember at that same time committees were appointed by the Medical Boards of the City Hospital, the Metropolitan Hospital and the Kings County Hospital, and these three committees forming a joint committee went to the Mayor and asked him to intervene and to compel the Health Board to rescind its action looking toward the supervision of venereal diseases. And all that the Health Board required then, or asked then, was that cases of venereal disease under treatment in general hospitals and in dispensaries should be reported to the Health Department, it providing laboratory facilities for the diagnosis of venereal diseases.

Nothing could have been sharper than the criticism at that time on the action of the Board of Health, or more general than the demand of the medical profession for the rescinding of that action. That was exactly what happened with regard to tuberculosis years ago, and I spent a good part of the winters of 1898 and 1899, and part of 1900 in Albany, trying to prevent the enactment of legislation which was initiated by the New York County Medical Society for withdrawing the power from the New York City Board of Health to deal with tuberculosis at all. The New York County Medical Society at that time wanted to take away from the health authorities the power to deal with tuberculosis. At the present time, I think, in the state and city laboratories there are about 25,000 Wassermann tests made a month. Seven years ago the work was just begun.

Now the general attitude of the medical profession is part of the kind of work that they do; the fact that a physician is generally so absorbed in what he is doing, his own work and the work with his own patients, that he does not look out and get a broad view of the situation as it exists in the state, and his attitude, the natural attitude, is one of obstruction. Now, I do not venture to maintain, nor would I for one moment argue, that the health centres legislation which was introduced last year is model legislation. It was the best that we were able to devise at that time. The need for it exists. Now, no action which this Society, the Academy of Medicine, or the profession of medicine in this state may take—no action of a negative kind is going to change that situation, and if we do not change it somebody else will take action to meet this condition. If you know anything about Albany, or if you know anything about the Legislature, you know that the control of the Legislature does not rest in New York City nor in Buffalo nor in Rochester, but it rests with the farmers in the rural districts, and when they decide that they

want some particular legislation they will have it. It does not make any difference whether the medical profession want it or whether they do not want it, it will be enacted, because it is the farmers who control the Legislature; they control the Republican vote.

Now, the thing for the medical profession to do, in my judgment, is not to come to Albany, as they always have done, if they came at all—generally they did not come at all, to obstruct something or to oppose something. The thing to do, in my judgment, is for the medical profession to get together and to propose something constructive. If this is not what they want, then let them propose something that is better, and which will meet the situation in the city and in the country districts. Do not go as obstructionists always. That is what the Legislature will tell you; "the medical profession always come here to oppose; they never have had anything to propose." And unfortunately they have not, as a rule, shown very great activity even when their vital interests were involved.

Year after year we have had a bill before the Legislature legalizing the practice of chiropractic. Year after year the Department of Health has had considerable influence in Albany, and the Department of Health has opposed these bills before the committees, and either the bills have not been reported out at all from the Public Health Committee in one House, either the Senate or the Assembly, or if they were reported out they never came to a vote.

But last winter the situation was different. The chiropractors gained a good deal of power, and they raised a considerable amount of money, and they retained competent legal counsel, and they had a good deal of influence in a community where one of the leaders in the Legislature lived—in fact, he was the leader in one of the branches of the Legislature; and the result was that we saw very early that the Chiropractic Bill was going to pass the Legislature, and we notified every prominent county medical society in this state, we notified the President and the Chairman of the Comitia Minora of the New York County Medical Society, the Kings County Medical Society and all of the others, and we implored them to send representatives to the joint hearing in Albany to oppose that legislation. And what happened? Not one single person appeared; not one single person.

The only opposition that came was that of the New York State Department of Health and the State Department of Education. We asked Dr. Rooney to also come and appear, but he said he was not authorized; he was not on the Legislative Committee, but would come and appear for us if we desired it.

Now if your Comitia Minora, or some special committee, will study the situation and offer constructive legislation or constructive criticism, that is what we want. But you may be quite sure that the attitude of single opposition will not much longer be effective.

IMPENDING PUBLIC HEALTH LEGISLATION*

HENRY LYLE WINTER, M. D.

CORNWALL, N. Y.

I came here tonight on the invitation of your President, but more for the purpose of learning what the attitude of this County Society might be in reference to impending public health legislation than to impart any information, except possibly on one or two minor points. The officers and chairmen of the standing committees of the State Society have a great deal of trouble many times because we are not conversant with the attitude of the various county societies throughout the state. We have frequently thought we were doing the right thing, and have taken action which we found out subsequently was opposed by some of the larger or smaller county societies. Now I think there ought to be some method established in the several county societies which would help out the chairmen of the standing committees in the State Society, by giving them the information they need.

It would seem a good plan for the Secretary of this and every other county society to be instructed to send full reports to the Editor of the State Journal of any action taken by the societies upon public health matters. Those reports should be sufficiently enlarged upon to convey the attitude and desires of the societies, not merely reports as to whether they voted for or against a measure, but containing enough of the discussion so that the information might go broadcast through the state, and might carry to us, the chairmen of the State Society committees, enough information to help us in taking whatever action we have to take.

The Committee on Medical Economics of the State Society expects or hopes soon to be able to meet with representatives from all the county societies and take up these several matters which will probably come before the legislature, in a manner which will be satisfactory to the various parts of the state. The interests are so different throughout the state that we need some system of this kind.

I want to say a few words tonight about three subjects: first, the annual Re-registration Bill which will come up, then this Health Centre Bill which has already been so well discussed, and the Chiropractic Bill.

Health Insurance has been pretty thoroughly discussed and it, too, will probably come up this year. I think we all know where we stand on Health Insurance, and I do not imagine that there is the least particle of danger of such a bill going through the present Legislature. I do not think we need have any anxiety on that matter.

The annual Re-registration Bill that I am going to speak of again is a very good illustration of the point that I was trying to make a few minutes ago, of the necessity of a State Society Committeeman being familiar with the county societies' desires. As

the Chairman of the former Intermediary Committee, before the establishment of the Economic Committee in the State Society, I met with Dr. Downing and others and we went into this annual Re-registration Bill very thoroughly. I went around to different parts of the state and talked about it. I came down here, and I do not know whether you all remember how badly I was condemned or not, but I was, and so was everyone else who came down for that bill. New York County did not want it. I do not know whether New York County wants it yet or not.

But it is a bill that will probably come up again this year. I am not talking in favor of it tonight, although I am in favor of it; but what I want to say to you is that this will come up. Similar bills have been in force for several years with the dentists and the veterinarians. I believe the dentists and veterinarians like the result. They have had the effect of driving out of dental practice some of those dental parlors and other fraudulent dental interests, and they have put out of business a lot of unregistered or unlicensed veterinarians.

I want to mention briefly that there are two things which this bill certainly does to the medical profession which are objectionable. The first thing it does, with its annual Re-registration, is to take away what is a life-long privilege of the practice of medicine, and to make it an annual thing, contingent upon re-registration. As far as I see there is no objection to that, except that if you forget to register you are temporarily out of business; but you can get back into it. The other thing is that it charges the medical profession a fee for the protection of the public. Those two things are objectionable. There are other factors which to my mind offset these objections.

The way in which the law has been worked out with the dentists and with the veterinarians is this: The dentist who registers under the Annual Re-registration Law receives from the State Board of Regents or the State Department of Education a list of the licensed dentists in his vicinity. If some dentist next door to him is practising dentistry and his name is not on that list, he is requested to write to the Department or to the Board of Regents and inquire why Dr. Smith is not on the list that was sent to him. That is all he has to do, but he is asked to do that. The State Department takes up the question of Dr. Smith's practising. If he is registered and it is simply an oversight that his name was not on the list, the dentist is so notified and Dr. Smith goes on with his practice. If he is an illegal practitioner of dentistry the Attorney General of the State undertakes to get evidence and to prosecute him. In that way the legal practitioner of dentistry is protected against the illegal one, without any particular effort on his part, and without having to depend upon local district attorneys; or without being met by a local district attorney with the statement that, "If you will bring me the evidence of illegal practice I will be glad to prosecute the offender."

When we consider the Health Centres Bill it seems

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to me that we are facing a condition which is very important. There have been statements made as to the necessity for some kind of further care for the sick. Now, if the sick need further care, nobody ought to be more anxious to give it to them than the medical men. I have gone over some parts of the state as carefully as I could. I have not been into the extreme rural districts, such as Livingston County, for instance. I do not know the geographical arrangement there; but I do know that in the southern section of the state, south of Albany, with which I am more familiar than with any other part, the conditions are not apparently as bad as would appear from the statements of representatives of the State Department of Health.

A good deal of my work is consulting work through that section of the state, and I meet a great many country doctors; and they are pretty good all-around men, as Dr. Biggs has said. The country doctor is a good diagnostician, he has got a lot of good sense, and he follows up his cases very well indeed. He ordinarily makes a pretty good diagnosis, and he is ordinarily willing to have consultation if he can get it. The only criticism which I have to offer of him is that he appears to hesitate to call his neighbor in consultation. I do not think that he gets together with his fellow practitioners in his own town often enough.

In the statistics which were published in the Journal of the State Society some time ago, which resulted from a questionnaire sent out by the Committee on Economics of the State Society relative to the incomes of doctors, I noted that there were a great many men throughout the state who were engaged as part time specialists, which means that they are especially interested and in all probability especially competent in certain lines of work; more competent than the ordinary man to make detailed diagnoses in some difficult cases in their particular lines of work. So that, judged from those statistics and from what I know of the country, reasonably good consultants are obtainable throughout the rural districts, where there are no cities but only goodsized towns, because I found a great many of those part time specialists who are living in communities of 5,000, 6,000 or 7,000 people.

The present condition of the roads, transportation facilities, the automobile, make it possible for patients to be moved much greater distances than was possible a few years ago and for physicians to travel much greater distances, so that it is very much easier for the rural resident to get in touch with special advice than it used to be. Of course, the rural patient is a longer way from his doctor than the city patient is, and possibly he does not have as many calls made upon him, but he gets along reasonably well and, in my experience, does not suffer from neglect. I do not think the death rate is any higher, and the morbidity rate apparently is not higher.

The Health Centres Bill proposes to do certain things to take care of these districts. I infer that the

clinic which was held under the auspices of the State Department of Health at Goshen, in Orange County, in August of this last year, was an experiment by the Health Department as to the kind of work which would be of advantage in the rural community. I attended that clinic. I was very courteously received by the Director, who spent a good deal more time with me than he could afford to, I know, and I went over the work that was going on rather more carefully than the casual visitor could have done. The staff of medical men who were there to do the work was excellent. Some of them are my personal friends. They were all good men, but they were not any better men than were available in the immediate vicinity in which the clinic was held.

That brings up the point which Dr. Hunt made a few minutes ago, that when a man is designated by the State Department of Health as a specialist in a particular line, he gets a certain amount of prestige from that which he probably does not deserve, above his neighbor who is not so designated by the State Department of Health. There was some criticism by the local men of the singling out of these other men as a little bit better or a little bit above the local practitioner.

This clinic was held for three days. The chemical laboratory equipment was very good; the X-ray laboratory equipment was very poor. The equipment may have been good enough, but it did not work very well; the results were not satisfactory. They examined a great many urine and blood specimens in the laboratory, and I believe they were well done. The work that was done in the various departments, by the men in charge of them, I can only sum up by telling you of reports which were made at the meeting of the Orange County Medical Society in the early part of this month. I attended that meeting and listened to them.

Three men reported 90 patients referred to the clinic, with the following results, that out of the 90 patients referred, on 7 they had information which was helpful to the physicians but on the 83 no diagnostic aid was secured by referring these patients. This carries no criticism of the work of the doctors of the clinic. It is, to my mind, merely an evidence that the clinic was not necessary. The local men had already exhausted diagnostic methods and had made diagnoses, which the clinic merely confirmed. In other words the residents of the Goshen district were well taken care of by the local physicians.

One man having referred an old poliomyelitis case was told to send him to Boston and have a tenotomy done. Now I think they do tenotomies in New York; I do not know, but I think I have heard of it. This particular advice is another evidence of the possible injustice to others when the officially designated specialist enters the field of practice.

As far as the medical profession of Orange County was concerned, apparently, from their reports, the clinic was of no particular service to them; that is, they had few cases in which they were aided. I had

two men tell me—they did not speak at the meeting, they told me afterward—that they had sent patients there and they had been satisfied with the returns which they got. I asked them to send me their reports, but I have not received them up to the present time.

There is another point which I wish to bring out in reference to this clinic, and that is that these gentlemen who attended and took charge of the work received for their compensation \$25.00 per day. Now, they were away from their work for three days each. No man can afford to be away from his work for three consecutive days for \$25.00 a day. It simply means that the medical men in this particular instance were bearing the expense of the clinic there, just the same as they bear it in dispensaries in the cities. They were giving up their time for inadequate compensation. It seems to me that that is an economic point that we should make in considering, if these clinics are established, how they should be managed.

Now, then, we have been objecting; I do not know whether we can offer any constructive criticism or not, but I am going to try. My experience with the country doctor and the country patient, is not that the latter gets inadequate medical attention. The medical attention is just as good as it is in New York City. If laboratory facilities were near at hand to help in diagnosis, the doctor would make just as good a diagnosis as he does anywhere else. But the trouble is—and this is true in New York as well as it is in the country—that the cases are not properly followed up. I would like to make a point of differentiation between actual medical service and social service, as you might call it. Suppose I have an epileptic come to my office from a family that is not able to keep a special nurse. This patient receives medical treatment, he gets advice regarding his diet and his exercise and his way of living. He can take his bromides and other medication and it will not do him very much good unless his general hygienic condition is taken care of, unless he follows out the régime which I lay down. At this point some trained person can take up the work and help the patient. That work can be done by a visiting nurse.

Take another example, an acute tonsillitis. We know that celiac conditions following acute conditions of the throat are common. We also know that overactivity and carelessness have something to do with the development of the secondary conditions. If the patient gets about too soon, is fed improperly, is not given sufficient air and sunshine he is liable to get up a heart condition. It is not necessary that this should be left to the doctor. It can be done better by a visiting nurse working under the doctor's direction.

The work the doctor does is to make his diagnosis and outline the treatment, and then comes in what I would be glad to call a medico-social plan of supervision and control. If you will give the country districts laboratories, if you will give them a laboratory technician, and if you will give them properly trained public health nurses, you will not need a state

subsidized medical profession. It will not be necessary for the salaries of the medical profession to be fixed by anybody, because they will not need salaries.

It does not make any difference what you call it—state medicine or county medicine—as long as the medical profession is salaried, as long as it is subsidized by no matter whom, it is going to keep the right kind of young men out of it. I believe that this sort of system can be followed up with success, and leave the doctor alone; let him continue his present relation with his patient. The patient is going to get along all right, the doctor is not going to be subsidized, and you can get men to go into the rural communities if you give them an opportunity to follow up their work and know what they are doing. The country is not a bad place to live in.

Before concluding, I want to refer briefly to the Chiropractic Bill. I am only using that as a means to get in a suggestion which I have to make. I took this up with Mr. Whiteside briefly, asking him his opinion. It is my opinion that if we amend the Medical Practice Act so that no matter what a man wants to practice, whether it is chiropractic or any other thing, he can do so provided he passes the same examination in other things as we do. It will be a good thing for the profession. You know we eliminated the osteopaths when we made the General Medical Examining Board and put an osteopath on it, and it made it necessary for the osteopaths to pass the same examinations that we were compelled to pass, and to have the same educational requirements for entrance to practice.

Now, then, if you make this a specific act against the chiropractor it will probably make it necessary—because bills cannot be retroactive, notwithstanding the fact that the chiropractors are illegally practising—to license every chiropractor who now has his sign out; but if you put it through regardless of the chiropractor and get it on the statute books before the chiropractor is recognized as such, then you will have a good Medical Practice Act, which will protect us from practitioners of that character for all time.

I think that this Society and the State Society ought to make every effort to get behind a bill of that character, and make it general—do not make it against the chiropractor; and I do not believe we would have very much trouble in putting it through. Of course, the quacks would all fight us, but still I believe it could be done.

DISCUSSION*

GEORGE W. WHITESIDE, ESQ.

Counsel, Medical Society, County of New York.

I have no prepared paper or speech. My purpose is, as far as I can, to cover briefly the ground that has been covered so ably by the other speakers, but possibly from a different angle.

I was greatly interested in the discussion by the Health Commissioner and the interest shown by that

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department in this problem; an attempt, a sincere attempt, to make a study of a situation that they regard as serious. Of course, apparently this whole question is made to appear as a rural question, and I do not know whether upstate they are holding meetings on it or not, or whether they are wildly excited about it, or demanding this form of relief. Let us hear from the rural districts on this matter.

Of course, we have to look at this great problem of medicine in the state from the point of view of the entire state, and get away as far as possible from sectionalism, get away from the political idea that has done a great deal to put on the statute books of this state poor legislation, both in medicine and in other branches,—the idea of truckling to a certain class in the community, truckling to the farmer or to the laboring man, legislating for a class. The time has come, it seems to me, when we must get away from that idea, and we must regard the welfare of the entire people of the state, and not simply some privilege-seeking class in the community.

The first thing that impresses me in this Health Centres Bill is that it is largely designed to treat the question from the class point of view. I think, however, that back of it are absolutely sincere motives. I was deeply impressed with the sincerity of the speaker who explained the origin of the bill. At the same time—it may not be conscious, and I do not believe it is—back of that bill is a great idea, the idea of forcing upon the medical profession a combination of effort on their part. The weakness that we have displayed heretofore in legislative matters has been due in part, it seems to me, to an inability to function as a combination, to express the congregated judgment of a great profession. We have had too much individual expression of opinion. The practice of medicine has been for so long a matter of the individual and so different in its development from the development we have found in industry. In industry the tendency has been toward combination, and where government has come in and intervened against combination, it has been because the combination had acquired such power that it was becoming almost a superstate, and required curbing by the government. We have not reached that point in medicine. We have no ill-effects suffered from medical combination, because at present it does not sufficiently function as a combination. The great function of medical organization in the State Society and in the various county societies, it seems to me, is to permit the expression of judgment of a great profession, and to blot out the little differences here and there, to express a firm, fundamental primary principle, and omit many of the irrelevancies or the details that only cause controversy.

Now, are we going to express on the Health Centres Bill a judgment on the fundamental proposition, to wit, a proposition that a certain part of the community shall be the recipients of a certain form of combined medical assistance, a combination of medical men not of their choosing, not initiated by them, not proposed by them, but rather initiated and

controlled by purely governmental sources? That seems to me to be the fundamental question in this Health Centres matter. It may be a wise thing that this bill has come up to impress upon the profession the need of some form of united effort, possibly, in the practice of your art. We have had the efficacy of that form, that combination, in all of our hospital work, demonstrated during the war. We have hundreds of modern large centres, where such group systems are in operation. Whether or not that is to become general, whether it can be adapted to the needs of the public, seems to me to be the leading question.

I do not think there is any difficulty in supplying the demand for doctors up the state, if the inhabitants there need the attention. You might as well, it seems to me, establish through the Health Department, employment agencies throughout the state, to furnish cooks and domestic servants, who are just as scarce there apparently as doctors are, as to furnish doctors by that system. Let us supply the country, if you please, for the purpose of argument, all through, and you will find that in every department of life—and medicine is only one department of life—you would have to follow out the same principle of constant supply, of constant organization of very expensive forms of operation, to meet what apparently is not a great demand.

As far as going into the rural districts is concerned, doubtless the rural districts will soon be served, under the progress being made by airplane. It will be but a few years when from cities 100 miles distant there will be constant means of transit, and such methods of furnishing medical help in emergency. I have very little doubt about it in my own mind, and I think that these centres that this bill would create in certain localities would soon become obsolete. I think, however, that there is nothing better than a discussion of this subject in the medical profession. It may awake the profession to the need of some united effort on its part.

The placing of the profession on the wage basis would soon follow the general operation of a Health Centre law. I have already written on that subject briefly, and have expressed a firm conviction. The last thing you want in the practice of medicine is a wage plan. You may find it necessary, as we do in law, to change the method of operating, so that you have the benefits of organization in your work. At one time not far back one lawyer did all the work, from the writing of the pleadings to the writing of the brief, the argument and trial of a case. The lawyer today has found it necessary to build up an organization of other lawyers with him, some of whom are on a parity with him, others of whom are employed by him, to do a great deal of the detail work and as a result we have wonderful law organizations in the large cities today. They are built on a plan of absolute business efficiency. They are business propositions, and necessarily so, to meet the demands of a great commercial centre like New York.

The time may come, possibly, when there may be such combinations of physicians as there now are lawyers in the law, and wherein the men may come up and graduate from a relationship of employee to that of partner. I do not believe there ever will be, however, in medicine, a recognized corporate practice of medicine other than one which perhaps must always exist, such as you have in the case of hospitals. I think the medical profession, as far as its organization is concerned, the organization of its efforts and its contact with the public, the treatment of its cases, is undergoing a change. I think that in a very few years radical differences have developed between the conditions that existed then and those that exist today.

I merely suggest these matters as subjects of possible consideration. Of course, we are accustomed to revolutionary changes in this form of government of ours, but peaceful revolutionary changes. We have had constitutional amendments by which the taxing power of the government has been made enormous, so that it might practically mean a capital tax, so that the accumulation of swollen fortunes can be checked. We have extended government powers enormously, and the exercise of police power of government today is greater than it ever was before. The courts are timid about interfering with any legislative act that finds its sanction in the police power. It is a wonderful thing, that practically overrides all constitutional limitations, if the subject matter on which it operates has reasonable relationship to the power that is exercised. That is all the courts inquire into. They will not judicially review whether or not the Legislature should have exercised that power.

That is a thing that we have to watch jealously in this country today. The exercise of the police power over the medical profession is a thing that in the future will have to be jealously watched by the profession, and not simply obstructive measures or tactics resorted to to meet the exercise of police powers by the state that are detrimental to the profession, but to build up through the organization which you now have, through the committees that you now have, a constructive program for beneficial legislation that will call upon the state to exercise its police power in behalf of the great public and also not to the detriment of the medical profession.

There was a slight reference made to the subject of Chiropractic, as to the position of the County Society in this county on that subject. I would like to state briefly that when that matter was before the Governor for his consideration there was, I should say, a trainload of physicians from New York and Kings and Queens, and various boroughs of this city and from many rural districts, and I had the pleasure of enjoying the day with them, and it was my privilege likewise to be called upon by the Governor to speak on the chiropractic measure, and to present legal arguments against it, and he seemed to receive the arguments that indicated he was strongly impressed.

DISCUSSION ON HEALTH CENTRES*

Dr. J. Milton Mabbott: I would like to just comment on the Health Commissioner's statement that we never did anything but oppose. In the first place, he even himself mentioned one occasion when we did not oppose. I do not know why we should not regularly oppose anything which is objectionable. Men, and women too, have votes in this country, and I do not know why we should not vote in every election, vote the way our consciences tell us to vote, state how we are going to vote if we wish to, or be protected by the secret ballot if we prefer not to state how we intend to vote.

Dr. L. W. Zwisohn: Our State Commissioner of Health said that the trouble with the medical profession is that we always go to Albany to oppose, not to construct. It seems strange to me that we, as a medical body, legalized by the state—we are practising medicine under the protection of the state, and no man can practice medicine unless he gets a license from the state—should be assumed to always meet as a body of criminals. Laws have been introduced into the legislature from year to year which are against the medical man to whom the state gave the license to practice medicine. Of course we must oppose these bills. Bills are introduced in favor of osteopaths, chiropractors and other outlandish cults and if we do not oppose them we fail to do our duty.

In the proposition for health centres, it is not only whether there are good points or bad points; it is merely a wedge, and a wedge for state medicine. If state medicine is a good thing, let us have it and not a wedge. The Commissioner argues that it is going to be passed anyway. Five years ago when the fad for compulsory health insurance first came into vogue, the medical profession were up against it, and except for a few men, did not know where they stood on the subject. Those who were in favor of it said: "It is going to be passed, what is the use of fighting against it?" But a few men started the opposition, showed the injury it would do to the medical profession and to the public, and said it shall not pass. The medical profession combined against it, and it did not pass. It is no argument to say a thing is inevitable. We must oppose anything that is not for the public welfare; and any legislation which is for sectional or class interests is not for the public good; any law which we should favor, should be a general, not a class law. It would be well if the State Commissioner of Health, who is one of the most conscientious men that lives, and who I know means well, should go to the Legislature and tell them: "Do not introduce any bill affecting the medical profession unless you first go to them with it and let them pass on its merits;" then if it is good for the profession and the general public, we will never oppose it."

Dr. Henry S. Stark: I think the Health Centres Bill is the Health Insurance Bill in disguise with all the obnoxious features which the Health Insurance Bill had, and which involved the expenditure of millions

*Courtesy of the Medical Society of the State of New York.

and millions of dollars. The financing of the Sage-Machold bill would mean the settling of millions of dollars upon the rural population. I do not absolutely know, but I have my doubts whether the state is prepared for such an expenditure. Moreover, it would put into the hands of the Health Commissioner of the State of New York, untold power. I would be willing to put such powers into the hands of the present active incumbent of that office today, but I would hesitate to put such powers into the hands of an unknown political doctor. The enactment of such a bill into a law would mean that many physicians in the rural districts would be put out of commission and have their means of earning a livelihood taken away from them. What medical man could put himself in competition with such a picturesque contrivance as was exhibited at Goshen, known as the Healthmobile, and of which I know something? It was claimed to be a great success because the whole population turned out to see it. Well, they turned out to see it for the same reason that they turn out to see the circus when it comes to town. It aims to alleviate the inconveniences and disadvantages of the rural physician, but those disadvantages are not as great as are pictured by the Health Commissioner and the other proponents of the Health Centres Bill. Mr. Whiteside has stated that the automobile has annihilated distances and that the aeroplane will annihilate distances in the future. The country physician and the patients are not affected by distances as formerly. We, New York physicians, sometimes travel greater distances than do the rural physicians. Yesterday, I made calls in Bath Beach, Brooklyn, and the Bronx—a distance of fifteen miles—and I thought nothing of it. The country physician's life is a better one today than formerly. Of course he is unfortunate in one respect—he never, or rarely can rise to a position of great eminence. Of course the country physician grows old in service, he grows gray and hoary in the service. Dr. Biggs says the average country physician has been 27 years in the service and has gotten to be 50, 55, or 60 years of age. I can only ask Dr. Biggs to remember that he may be 50 years of age, that he may have been 25 or 30 years in service, both as a practicing physician and as a public official. There is a great difference in country practice from what it was in years gone by. Then, in a crucial moment, the country patient had to travel long distances to be operated on, usually to New York City. Now, things are quite different. In almost every town and second or third class city, you have not only good hospitals, but you have good specialists and the New York specialists are feeling this very much. It has reminded me more than once that New York City is losing ground as a medical centre. But this Health Centres Bill is an obnoxious thing both to the physicians and the public in the rural districts, and this society has already, a number of months ago, gone on record as being opposed to it and I hope it will do so again tonight.

Dr. E. L. Hunt, in closing: I have been very much interested in what has been said here tonight, because it has been identically the same thing which I heard this fall from here to Buffalo—from one end of the state to the other. I think the key-note of the evening's discussion is the need of organization and the need of constructiveness. Now, the way to obtain constructive measures is by small bodies, and I think if this matter were referred to a small committee made up of representatives of the State Department of Health and made up of representatives of the medical profession, a great deal more would be accomplished than by taking up our time by discussing it. There is a great deal to be said, both pro and con, and I think that the man of vision will for the present steer a middle-of-the-road course.

DISCUSSION

Dr. E. V. Delphey, in closing: I am one of those who are sorry that the hour is so late for there is yet much which ought to be said on the subject. In the first place, it depends upon a man's position what standpoint he takes on a matter of this kind. For example, a salaried man looks upon a matter from an entirely different point of view than does a man who is dealing directly with the public and is getting his income therefrom. For the last 8 or 9 months, I have been a salaried man, and I begin to see how he looks at things, but thank God, I am still with the medical profession and against the "uplifters." I have here the propaganda letter of the State Department of Health regarding Health Centres, and in which many of the things which the Commissioner has said, and some things which he has not said, are recorded. It states that the average physician is 30 years of age before he becomes sufficiently productive to earn his living. The Commissioner does not say, but it has been estimated that the money and time spent from the date when a man leaves high-school to the time when he can earn his livelihood in the practice of medicine represents an expenditure of \$20,000.00. This should be considered as capital, and the physician should receive some return on his investment over and above his labor as a man—even a business man. He ought not to be compelled to fight so frequently—as we all are—against the various schemes put forth by various and sundry persons to reduce our earnings. As I said in my paper, this is entirely a case of supply and demand and the willingness of the person making the demand to pay an adequate sum for the supply. If a man should go far into the back-woods, would the state furnish him with asphalt or concrete roads? Would stores be established for his convenience if it were not profitable? Does not a man have to take the same chance regarding illnesses and injuries? Wherever it is practicable, means have always been found to establish what is necessary for the convenience and necessity of people all over the state, but there are some cases where it is not feasible to do all the things for the rural as for the urban inhabitants. I spent some time in the northern part of the state this

summer—in Livingston and Essex counties—and I saw the benefits of the state roads. I accompanied a surgeon from Saranac Lake to Tupper Lake—a distance of 31 miles—where he performed operations for appendicitis on two cases and returned in five hours. This short time was due to the state roads and the use of the automobile, as thereby it is much easier for the physician to get to the patient and the patient to get to the physician than formerly.

Reference has been made to the physician's objecting to reporting tuberculosis and venereal cases to the Board of Health. As I recollect—and I think I am quite correct, as it is very distinct in my mind—when this question came up before this society and the Academy of Medicine, it was opposed very strongly because the members thought they had no legal right to report anything opprobrious to someone else. Again, as I recollect, the Board of Health modified its demands by requesting that the cases be simply reported as such, or with the persons initials and without any address, which was quite a different matter. The gentleman says we are against everything. Well, unfortunately, for the last few years we have been compelled to be against pretty nearly everything which has been proposed because that which has been proposed has been against the best interests of the medical profession, and anything which is against the best interests of the profession tends to prevent the best men from entering the profession and is therefore against the best interests of the public. Why are we opposed? Because we have been made the goat. I am opposed to a great many things which the amateur and professional uplifters have tried to put over on us. As you know, from the State Journal of Medicine, the committee, of which I have had the honor to be chairman so long, sent a questionnaire to all the delegates to the State Society and to all the secretaries of the County Societies, outside of New York City. We found, of those reporting, that there were on the average $2\frac{1}{2}$ hospitals in each county; that three-fourths had laboratories; that in those which did not have laboratories the physicians could send their specimens by mail and get the reports within a reasonable time.

It has been said that Health Centres are inevitable. Nearly everything they have tried to put over on us was said to be inevitable. Compulsory Health Insurance was inevitable, and there was no use in fighting against it. And this is inevitable? Gentlemen, do you remember a place over in the northeast corner of France—Verdun—which the Germans bombarded with their heaviest artillery, and attacked with their strongest and best battalions for so many weeks? And do you recollect the slogan of those Frenchmen: "Ils ne passeront pas"—They shall not pass? And did they pass? Gentlemen, I think it is well for us to take that for our slogan also: "They shall not pass." Anything which is detrimental to the best interests of the medical profession, is detrimental to the best interests of the public also, and it must not, shall not pass.

Dr. H. M. Biggs, in closing: I want to express my very sincere thanks for your personal confidence in the present Commissioner of Health. I think one thing is very clear, and that is what we attempted to do, and what the council felt they had done, is exactly what you are asking for; that is, it is perfectly evident that we cannot get doctors in the rural districts unless it is more attractive, unless they are paid better, unless it is better worth while for them to go there, and that is the reason that we provided that the physicians in the hospitals and dispensaries shall be paid.

Now, the local communities could not pay them adequately, therefore we provided a state subsidy. I have always believed that the physicians in our hospital staffs should be paid. They are paid everywhere on the Continent, they ought to be paid here. There is no reason why men should serve on the staffs of hospitals for years and years, why they should serve on the staffs of the dispensaries for years and years without compensation. There is no reason why doctors should serve, any more than lawyers or any other class of men; and the purpose of this legislation was primarily to make arrangements whereby the physicians should be compensated more adequately for the services rendered; and as the local community would not do that—or would not be able to do that (modern medicine is a very expensive thing) a state grant was provided.

Now, if that is subsidizing the doctors then it is a subsidy, but I would regard that as anything but subsidizing the doctor. In a sense, it is subsidizing the local hospital, but that is very definitely done for a purpose, so that the doctor who does the work in that hospital will be adequately paid for the work he does. For the work he does there for the free patients, he is paid; for the work he does for the pay patients, the patients pay. This is entirely provided for in the bill. It is that the doctor does not any longer treat the poor patient without compensation. Then this is simply enabling legislation, that is all. It enables these communities to provide care for their people, that is all. It does not do anything further than that. I have always believed that there were two things that government owed to their people; and that is an elementary education, and provision for the preservation of health and prevention of disease, and care of the sick. And if they cannot provide it for themselves, we ought to provide it for them, the city or the state ought to provide it. It does provide education, the city does provide care for the sick. It is no more subsidizing than Bellevue Hospital is subsidizing, only the physicians in Bellevue Hospital do the work without pay, and the physicians in these hospitals would be paid, that is all. There is no other difference. I think if you will read this carefully and see where it leads, you will find that it is a fact.

I want to read, if I may, just one word. The House of Delegates of the American Medical Association, at its recent meeting at New Orleans, directed its Council on Health and Public Instruction to make a re-

port at its next annual meeting on the relation of the medical profession to the public. At the meeting on November 11th, the Council considered this matter, and in so doing asked to sit with it, Dr. Frank Billings of Chicago, Dr. Hugh Cabot of Ann Arbor, Dr. Wadsworth of New York, and Dr. E. S. Sampson of Creston, Iowa. The Council considered the following subjects and took action as stated below:

The Council of Health and Public Instruction believes that the American Medical Association should take steps to secure the following results:

(a) To assist local medical practitioners by supplying them with proper diagnostic facilities.

(b) To provide for residents of rural districts and all others who cannot otherwise secure such benefits, adequate and scientific medical treatment, hospital and dispensary facilities and nursing care.

(c) To provide more efficiently for the maintenance of health in rural and isolated districts.

(d) To provide for young physicians who desire to go to rural communities, opportunities for laboratory aid in diagnosis.

(e) The Council believes that these results can best be secured by providing in each rural community a hospital, Roentgen Ray and laboratory facilities, to be used by the legally qualified physicians of the community.

The Secretary of the Council was requested to study the laws of the different states bearing upon this subject, and to prepare an amended bill to be studied more fully at the meeting of the Council in March, 1921.

This practically covers exactly what the Health Centres Bill does, plus this, that the Health Centres Bill provides state aid for the establishment and maintenance of those hospitals, and undertakes to provide also expert consultants from time to time.

Dr. H. L. Winter, in closing: I have nothing to say, except that Mr. Whiteside very unfortunately said that this Health Centres Bill was not of any particular interest to you gentlemen who live in New York City. Just because he said that, don't you believe it. It is of interest to you, and if the rural districts want your support at any time either for or against the bill, whichever it may be, I hope you will remember that you are really interested. I did not like that, Mr. Whiteside. You kind of left us fellows who live north of New York County, out in the cold, and we need New York County's help sometimes.

HEALTH CENTRES AND ANNUAL RE-REGISTRATION BILLS CONDEMNED

At a regular meeting of the Medical Society of Bay Ridge, N. Y., held on December 14, 1920, the following resolutions were adopted unanimously:

First: Resolved, that we believe the Sage or Health Centre bill should be opposed on the following grounds:

1. That it is unnecessary for the reason that the

situation it is designed to correct, if it exists at all, cannot be remedied by legislation.

2. That it creates a state-wide political machine in which politics and not health might often be the primary consideration.

3. That the practical results obtainable would be disproportionately small compared to the expense which would be large, inflating an already plethoric state budget and increasing county taxation.

4. That it is essentially paternalistic.

5. That it is visionary, idealistic and impractical. We question whether it would be possible to man sixty laboratories in this state with adequately trained pathologists, bacteriologists, technicians, etc., especially when the meager salaries paid by the state are kept in mind.

6. That it concentrates too great power in one individual, the State Commissioner of Health.

7. That, if existing health laws are enforced, clearing the state of the cults of healing, as well as of the irregular and unlicensed practitioners of one kind and another, so that the medical profession of the state could get a fair deal, there would be no necessity for legislation such as this. Closer co-operation with the state and county societies would do much to bring this about.

8. That it means state medicine, a proposition fraught with more serious consequences to the public than even that afforded by compulsory health insurance.

Your committee feels that prudent extension of the activities of the State Health Department through local health officers, providing adequate laboratory and diagnostic aid, but with no incursion into the active practice of medicine is all that the situation calls for. We are cognizant of and sympathetic with the country practitioner and his problems as well as with those communities where there are no physicians. The Sage, or any other similar bill, will not put doctors in hamlets when the whole trend of population is to the cities, nor will any legislative enactment create with a magic wand skilled specialists, surgeons, technicians, etc., in sufficient numbers properly and adequately to staff the institutions called for in this act. Such bills as this are a species of sophistry and cannot be condemned too strongly.

Your committee further suggests that the state and all the municipalities in it should take up the question of further aiding our hospitals and clinics, which are in great need of adequate appliances and equipment to bring them up to date, it being a well-known fact that modernizing and enlarging these institutions will go a great way towards meeting the very provisions sought to be effected by this proposed legislation. State and municipal aid to our hospitals and clinics has been very meager and most of them are suffering and have been suffering for years for the want of adequate equipment, and the money spent in this direction would amount to very little compared with the millions that would have to be spent to make

effective that which it is proposed to do under the Health Center or Sage Bill.

Resolved that, Whereas it appears in the October issue of the *New York State Journal of Medicine*, on page 337, bottom of first column, that the Council of the State Society, on motion duly made, seconded and carried, directed the chairman of the Committee on Legislation of the State Society to introduce the Medical Registration Bill at the next session of the legislature and whereas, the Medical Society of the County of Kings has gone on record as opposing the bill.

Therefore, be it resolved that the Medical Society of Bay Ridge requests the Council to reconsider that motion and that a copy of this resolution be sent to the secretary of the State Society, together with the following memorandum as to our reasons for opposing this measure, *viz.*:

1. It nullifies the license already granted us to practice medicine in perpetuity and substitutes therefor a year to year license.

2. The present registration in the county clerk's office is sufficient.

3. The State Society publishes annually with great care a list of regularly licensed practitioners in this state.

4. It is class legislation in that the profession is to be charged a fee to create a fund for purging the state of illegal practitioners. That is properly a function of the state.

5. It is unnecessary, as the police power already exists for the control of those practitioners not duly licensed. More law is not needed but better enforcement of existing law is.

6. It is demeaning to a great and noble profession in its requirements as to filing of photographs. Why not finger prints?

7. It will cause expense and inconvenience with no proportionate return to the public or the profession.

ROLLIN HILLS, M.D.,
Secretary.

The Council of the Medical Society of the State of New York passed the annual re-registration resolution as requested by the House of Delegates, but rescinded it at the December meeting.—(EDITOR.)—*Journal of Medicine*, New York State.

THE LABORER IS WORTHY OF HIS HIRE

In the *British Medical Journal* Dr. Puckle, speaking of the country practitioner of today, pleads for hearty and unselfish co-operation and combination within our ranks as being the only way of successfully confronting the numerous forces attacking us from without. It is useless, he says, for a few to make a stand against encroachment on their right to a place in the sun at the hands of private patients and public bodies, if within their ranks are to be found those who are willing to accept what others with the true interests of the profession at heart indignantly reject. It is no use presenting a bold front to the common foe

if you know that you will probably be stabbed in the back by a so-called friend.

We must live, and, when all is said, the laborer is worthy of his hire. Surely, therefore, in the common interest, it should be possible for neighboring colleagues to put a stop to underselling, by mutually agreeing on a scale of charges suitable to each district, and based on occupation and mileage, and loyally keeping to it. That is one line our combination might take, and though more or less sordid detail, is none the less an important one. That "union is strength" has been true for all ages, and now that the struggle for existence it daily growing fiercer has passed beyond the region of platitude.

METHODISTS FOR VIVISECTION

To the Editor:

I am enclosing herewith a copy of a resolution passed at the recent session of the California Conference of the Methodist Episcopal Church, held in Oakland. It will go far, I believe, to show that at heart the Church is sound in its bearing toward scientific medicine and that the chiropractic propaganda alleged to have been issued from the Book Concern Building cannot represent the mind of the Church in general, but is of local and limited origin, and from the stigma of which the Church could clear itself.

Very truly yours,

R. T. STRATTON.

The following resolution was adopted by the California Annual Conference of the Methodist Episcopal Church at its late session in Oakland:

"The practice of medicine is not an exact science, and from the nature of the case cannot be. Yet the progress made in this profession is among the most wonderful in the achievements of mankind. In the relief brought to human suffering and the practical mastery of the great scourges of age-long diseases the medical profession has won for itself the high appreciation of man. The knowledge and practice by which they have so signally succeeded have come to them in a considerable degree by vivisection, a practice that produces some pain, but by which man is relieved from many-fold degrees of suffering. By their investigations and earnest service they will doubtless make greater advancement in that knowledge which will bless the world. We wish to record here our high appreciation of their services and to declare our purpose to take a reasonable interest in their work and the protection of their privileges."—*California State Journal of Medicine*.

SAY WHAT YOU WILL, A WOMAN REMAINS ALWAYS A WOMAN

Dr. Horace M. Brown of Milwaukee, Wisconsin, the greatest authority in the world on Endocrines and their relation to body function, before the Tri-State District Medical Association, October, 1920, at Waterloo, Iowa, said:

The present widespread disturbances of social order are the direct result of the teachings of men, presumably qualified to lead, who, themselves suffering from a lack of balance between endocrine and cerebral function, teach theories of political economy, ethics and social economics, while utterly ignorant of the physiology of the body and of the relations of the endocrines to psychology. The present economic situation in the world is the direct outcome of perversion of endocrine activity through exaggeration of the emotional side of cerebration at the expense of the intellectual side; for endocrine activity stimulates emotion; and again emotion creates endocrine activity and a vicious circle is formed.

It is unfortunate at the present time, when it is necessary that every educated person should be prepared to stand firmly upon a foundation of common sense in regard to social order, that the teachers in our universities promulgating such theories as I have mentioned, have the opportunity to be heard by so large a number of young women. For, say what you will, a woman remains always a woman, and it is an essential and unchanging factor of her nature, that her emotions are more precious to her than her intellectuations. The results of such teaching falling upon the plastic nature of the naturally emotional part of humanity are leading to endless complications in social life, and while these complications can have no lasting term of existence through any great period of years, yet while they do last they are productive not only of great disorder, civic and moral, but also of notable degeneracy in the attitude of women toward those things which are naturally their normal function and normal purpose for existence.

We of our profession are being constantly brought face to face with some of the problems which are the result of the persistence of endocrine action upon the emotional side of women after the menopause. Some of these are extremely amusing and some tragic. It has been my experience that women who reach the menopause go in one of three directions. The first and the greater number become the dear, sweet, lovely old ladies; another group still feeling the effects of the endocrine stimuli of the ductless glands, become distinctly sexually immoral; while the third group becomes entirely derailed. The mother instinct still persisting, they become meddlesome busybodies, useless interferers in everybody's affairs, wildly desiring newspaper notoriety thinking it to be notability, and a reputation for prominence. This latter class form one of the curses of modern society, and there seems to be no solution for the problem which they present.

Yet we of the medical profession can possibly forgive them, for with our knowledge of the endocrine function of certain portions of their bodies, we recognize the spark of truth which was enunciated by the wise Arabic philosopher, Moarbeda,

and the philosopher of Bologna, who said their faults should be forgiven them for "they were the work of the womb."

FIGURING THE DOCTOR'S INCOME TAX

BUREAU OF INTERNAL REVENUE,
WASHINGTON, D. C.

Professional men are asking just now how they should figure Income Tax. The following article is prepared to meet this demand for information.

RETURNS FOR 1920

The present Income Tax law requires that returns for 1920 be filed on or before March 15th, 1921, at the office of the Collector of Internal Revenue for the district in which the taxpayer lives. At least one-quarter of the tax due must accompany the return.

An unmarried person must file a return if his or her net income was \$1,000 or over; and a married person living with wife (or husband) must file if their joint net income was \$2,000, or over. A widow or widower, or a married person living apart from wife (or husband) is classed as a single person.

The requirement to file a Federal Income Tax return is not contingent upon there being a tax due.

Form 1040A is used for net income of not more than \$5,000. Form 1040 for net income over \$5,000. Instructions and a working sheet accompany each return form.

Every firm of professional men operating as a corporation must make an annual return of net income on Form 1120; if operating as a partnership, a return on Form 1065 must be filed.

Gross Income. An individual's gross income from a profession includes all compensation for his services.

Where services are paid for with something other than money, the fair market value of the thing taken in payment is the amount to be included as income. If the services were rendered at a stipulated price, in the absence of evidence to the contrary such price will be presumed to be the fair value of the compensation received.

In the case of a salary received, this should be shown separately, in Block B, of the return. Many professional men and women—lawyers, medical examiners, teachers, accountants, etc.—are officers or employees of a State, or a political subdivision of a State, such as city, town or county. Their salaries or wages as such officers or employees is exempt from the Federal Income Tax. The exemption also applies to fees received by notaries' public commissioned by States, also the commissions of receivers appointed by State courts.

As to fees for services to clients, patients, etc., these should be included in the gross income for the taxable year in which received, unless they are included when they accrue to him in accordance with an approved method of accounting followed by him.

Cash Basis. A professional man may make his return on the basis of cash intake and actual expendi-

tures for the year. It should be noted here that a taxpayer is deemed to have received income which has been credited to or set apart from him without restriction.

Accrual Basis. A more exact and equitable method of figuring net income is on the "accrual basis." This means a computation on the basis of income earned and expenses incurred, whether paid or not, that actually pertain to the taxable year, excluding income earned and expenses incurred in previous or succeeding years. A professional man who keeps books of account should make returns by this method, if his accounting method is one generally employed, and shows a correct net income.

Deductions. A special \$2,000 exemption and an additional credit of \$200 for each dependent is allowed to single persons acting as the support and head of a household. A professional man may claim as deductions the cost of supplies used by him in the practice of his profession, expenses paid in the operation and repair of an automobile used in making professional calls, dues to professional societies and subscriptions to professional journals, the rent paid for office rooms, the expense of the fuel, light, water, telephone, etc., used in such offices, and the hire of office assistants. Amounts expended for books, furniture and professional instruments and equipment of a permanent character are not allowable as deductions.

In the deductions from gross income, the law specifically bars personal living or family expenses.

In the case of a professional man who has a regular place of business and who rents a residence, but incidentally receives there clients, patients or callers in connection with his professional work, no part of the rent at his home is deductible. If, however, he uses part of the house for his office, such portion of the rent as is properly attributable to such office is deductible.

Bad Debts. The uncollectible bills of professional men, particularly doctors, dentists and lawyers, have a very important bearing on the net earnings for each year. The principal point in connection with such accounts made in Income Tax procedure is that there can be no allowance for such bad debts in returns figured on the "cash basis." That is, a person who has been making his annual returns on the basis of cash received and actual cash expenditures each year has never shown as income his accounts with patients or clients, and is, therefore, not entitled to take them out of income.

On the other hand, a person who annually figured his gross income on the "accrual basis," that is, included his cash receipts and charges against patients and clients for all of his services performed during each year, is entitled to a deduction for "bad debts" covering such accounts as he ascertained during the year were uncollectible and charged off on his books.

An account merely written down or a debt known to be worthless prior to the beginning of the taxable year is not a proper item for deduction.

Wear and Tear. A reasonable allowance for the

wear and tear and obsolescence of such instruments and equipment, etc., is allowed. The proper allowance is that amount which should be set aside for the taxable year in accordance with a consistent plan by which the total of such amounts for the useful life of the property will suffice, with the salvage or scrap value, at the end of such useful life, to provide in place of the property its cost or its value as of March 1, 1913, if acquired by the taxpayer before that date.

Obsolescence. When through some new invention or radical change in methods, or similar circumstance the usefulness in his profession of some or all of his instruments or other equipment is suddenly terminated, so that he discards such assets permanently from use, he may claim as a loss in that year the difference between the cost (reduced by reasonable adjustment for wear and tear, which it has undergone; and its junk or salvage value. If the apparatus was owned prior to March 1, 1913, its fair market value on that date should be considered, instead of its cost, in figuring obsolescence. This deduction is allowed by law, but the taxpayer must be able to substantiate any claim made on this basis.

The penalty for failure is a fine of not more than \$1,000 and an additional assessment of 25 per cent of the amount of tax due. For wilful refusal to make a return the penalty is a fine of not more than \$10,000 or not exceeding one year's imprisonment, or both together with the cost of prosecution. A similar penalty is provided for making a false or fraudulent return, together with an additional assessment of 50 per cent of the amount of tax evaded.

INCOME TAX IN A NUTSHELL

WHO? Single persons who had net income of \$1,000 or more for the year 1920; married couples who had net income of \$2,000.

WHEN? March 15, 1921, is the final date for filing returns and making first payments.

WHERE? Collector of Internal Revenue for district in which the person resides.

HOW? Full directions on Form 1040A and Form 1040; also the law and regulations.

WHAT? Four per cent normal tax on taxable income up to \$4,000 in excess of exemption. Eight per cent normal tax on balance of taxable income. Surtax from 1 per cent to 65 per cent on net incomes over \$5,000.

Public Health

LETHARGIC-ENCEPHALITIS IN ILLINOIS

With thirty-eight cases of lethargic-encephalitis or "sleeping sickness" reported in Chicago during January, the Director of the State Department of Health has instituted control measures to prevent the spread of the disease downstate where some half dozen cases at various points have already been brought to the attention of officials. A field physician from the Department has been assigned to isolate all local cases

while the Chicago Health Department is handling the situation there.

The so-called "sleeping sickness" now prevalent in Illinois is unlike the African disease known by the same name and carried by a fly. Present knowledge indicates that the local malady is due to an infective organism or germ, and contrary to the long belief of the medical profession generally is not connected with any other disease.

Steps have been taken to insure the prompt reporting of all new cases that may develop.

INSPECTION OF SWIMMING POOLS

The State Department of Public Health, through its Division of Engineering and Sanitation, has made a preliminary survey of all swimming pools in the State with a view of making detailed inspections of each pool later. Subsequently, a State bulletin will be prepared giving full information relative to construction and operation of swimming pools.

NEW QUARTERS FOR CRIPPLED CHILDREN

St. John's Sanatorium, located on a farm near Springfield, opened new quarters for crippled children in the new building, January 1st. This work will be under the general supervision of Dr. Clarence W. East, Chief of the Division of Child Hygiene and Public Health Nursing of the State Department of Public Health, and will consist largely in hygiene and re-education of victims of poliomyelitis.

Correspondence

CHRISTIAN SCIENTISTS PRETEND BY SOME SORT OF MENTAL PROCESS THAT THEY CAN CURE THE MOST VIRULENT COMMUNICABLE AND OFTENTIMES INCURABLE DISEASES

Los Angeles, Cal., January 10, 1921.

Charles E. Humiston, M. D.,
President-Elect, Illinois State Medical Society,
Chicago, Illinois.

Dear Sir: Permit me to acknowledge receipt of your favor of December 29, 1920, enclosing clippings from the *Chicago Tribune* regarding my official attitude as district attorney of Los Angeles county, in reference to the conduct and practices of so-called Christian Science practitioners and members of similar cults.

You suggest that I might help your society by giving you something for publication in the *ILLINOIS MEDICAL JOURNAL*.

Owing to the increase in crime and the inadequate force at my disposal, I am overwhelmed and overburdened with work, and consequently would not have the time to enter into any elaborate discussion of this matter.

It is a matter of common knowledge that these fake healers are constantly defying the sanitary and quarantine measures designed and intended for the protection of the people at large, and that they pretend by some sort of mental process they can cure the most virulent, communicable and oftentimes incurable diseases. They even indulge in the absurdity of absent "treatments."

The knowledge that they are charging so much per prayer in dollars and cents makes their conduct, to my mind, still more reprehensible.

The number of lives of helpless and dependent little children who are sacrificed yearly on the altar of this fanaticism must reach alarming proportions.

I am engaged in investigating the conduct of these fakers wherever I can obtain the evidence, and have already had the district attorney's office represented at two inquests, with a view to criminal prosecutions of parents who refuse and neglect to provide medical attendance for their children.

These "practitioners" take advantage of a law of the State of California which allows persons to treat the sick by prayer, without the necessity of obtaining a medical certificate, but this does not relieve the parent of the obligation to provide the medical attendance required by the statutes in cases of sick children. Section 270 of the Penal Code of the State of California makes such neglect or omission upon the part of a parent a felony.

I am inclined to the opinion that the Christian Science practitioner might, in spite of the exception in the Medical Practice Act, be prosecuted for aiding and abetting the parents in their crime. Under legal principles that are known to any well-informed lawyer, the crime would be manslaughter on the part of the parents in case of the death of the child.

The great difficulty in handling this situation is found in the obstacles to the securing of evidence. I already have three or four cases under consideration, and whenever sufficient

legal evidence is presented to me or can be obtained, I intend to prosecute, and, insofar as I can, to throw the light of publicity upon this commercialized fanaticism that fattens upon the blood of helpless children and deluded adults.

It is regrettable that in many instances "accommodation" death certificates have been signed by physicians, and sometimes by the coroner, where persons were treated by these fakers. This practice should be immediately discontinued in every jurisdiction, and wherever children go to their death by lack of medical attendance, post mortems and inquests should be held to ascertain the cause of death, with a view to appropriate criminal prosecutions. Any defiance of sanitary and quarantine regulations by these fakers should be carefully scrutinized and dealt with.

Sometime ago when Los Angeles was in the throes of the "flu" epidemic, the Christian Scientists defied the health regulations and insisted upon assembling in their places of meeting, and the matter had to be taken into court to force a compliance with these humane laws.

We have found in cases of diphtheria and other communicable diseases, infected children have been allowed to go to school and to play with their companions, spreading the disease, and in numerous instances causing many deaths that might have been avoided but for the dangerous teachings and practices of persons who have been deluded into a belief that sickness and death may be avoided by some mental process beyond the comprehension and understanding of persons of common sense and sound judgment.

If my views upon this matter, hurriedly dictated, but which contains in an imperfect way my deliberate conclusions upon a very grave situation, can be of any service to you you are at liberty to print them in your periodical.

Thanking you for the honor of your letter, and trusting that my reply may be of some material service, I am,

Very truly yours,

THOMAS LEE WOOLWINE,

District Attorney for Los Angeles County.

P. S.: Kindly acknowledge receipt, and oblige.

ONLY A PHYSICIAN IS COMPETENT TO SAY WHAT CONSTITUTES LEGITIMATE PRACTICE OF MEDICINE

A LITTLE LEARNING IS A DANGEROUS THING, ESPECIALLY IN MEDICINE. A DOCTOR IS THE ONLY ONE COMPETENT TO MAKE A DIAGNOSIS AND PRESCRIBE TREATMENT

DO OUR LEADERS LEAD? SOMETIMES THEY DO NOT EVEN FOLLOW

SAMUEL A. BRAUN, A.B., S.B., M.D.

CHICAGO

In a recent number of the ILLINOIS MEDICAL JOURNAL there appeared an article under the title, "Do Our Leaders Lead?" The writer gave instances which he claimed justified the statement that our medical leaders do not lead the rank and file of the profession as they should. Possibly, instead of medical leaders it would be more proper to designate them as leaders of the medical profession, or recognized leaders, or so-called leaders.

For a long time it has been evident that something is wrong with the medical profession as a whole. It also appears that there is no doubt that a considerable part of the time our so-called leaders, or at least those who ought to be leaders, and those who are in a position to assume leadership, do not lead. Sometimes, as is indicated in the title of this paper, they do not even follow. That is, follow with their support some physician who, by virtue of having a little more backbone than others, or by virtue of the machinations of fate, or the whims of chance, happens to stand up for what he believes to be his rights, or in some other way runs counter to the ideas of certain laymen as to the rights and duties of the medical man. It would seem that, having attained a position of leadership, one should at least follow, figuratively, in any movement or cause which basically affects the medical profession, even if lack of time, or lack of interest, or disinclination to bestir oneself, prevented direct, outspoken leadership. If a doctor has been honored with leadership, or has been elected to high office, or has been admitted to a select coterie of the elect, it should mean something to him besides so much publicity and advertising, and pride in excelling, or in being said to excel, which is sometimes nearer to the truth. It should mean an opportunity

to help guard the good name and interests of his fellow medical and scientific men.

From a number of instances in recent years in which the leaders have followed a "laissez-faire" policy, I select one or two for comment. Consider the Narcotic Situation! The Harrison Narcotic Law permits a physician to dispense or prescribe narcotics "in the course of his professional practice only" and, "in the legitimate practice of his profession." Has it occurred to them that only a physician, or a body of physicians, is competent to say what constitutes "legitimate practice of medicine?" There is only one exception to this, and that is, a jury after receiving instructions from the court. But even here their opinion would be founded upon previous testimony by medical men. An ex-policeman, or revenue man, or even a druggist, employed as a narcotic officer is not competent to decide what constitutes legitimate practice of medicine. To be able to do so, one must be competent to make a thorough examination, diagnose the condition, and must then know what has been and is the custom of the general body of physicians in a similar case. So that it is wrong for a narcotic officer to say to a physician that he is in violation of the law merely because he may be prescribing a narcotic for a certain patient. *The condition of the patient must be known.* But is the revenue officer alone to blame? They know nothing of the practice of medicine, or of the history of medicine. They are only doing the best they know how. Are not our leaders more to blame for permitting such a condition, and for not putting the department heads right on this question?

Of course I admit that there are a number of bureaucrats connected with the enforcement of the Harrison Narcotic Law who, in their own minds, know more than all the doctors put together. With them it is always, "These d— Doctors." They possess what I call *the arrogance of ignorance*. They know it all simply because they have seen a number of poor, weak, miserable "dope-fiends" knocked about and man-handled by bullies. The fact that they may know a little anatomy or pharmacy only makes them more dangerous, because "a little learning is a dangerous thing," especially in medicine. Their lack of a knowledge of physiology, physiological chemistry, bacteriology, serology, pathology, etc., troubles them not at all. But once get a

few of them before a committee of fair-minded men, and let them be questioned by doctors who have made an impartial and unprejudiced study of narcotic addiction, and they would soon be hunting cover.

Medicine is a business as well as a profession, but the health and physical well-being of the public is in the hands of the doctors. Either this must be admitted, or all our protestations are hypocrisy, and might alone makes right. The narcotic problem is a serious one, and it is not being solved, and will not be solved by the methods now employed by the Government. Unless, as I said before, all the public talk about humanity is hypocrisy, and sufferers should be killed off without mercy, there are some people who have a lawful right to use narcotics. They should not be made criminals to get it, or the doctor made a criminal for supplying it. We frequently read of doctors being arrested for prescribing narcotics to these patients. Some of them, without doubt, ought to be arrested. But has anyone inquired who these patients are? Are they all recent recruits to the ranks of drug users? By no means. Most of them are the same ones whose names have appeared on the books of every doctor who has been arrested. Does not that, alone, seem to show that our leaders should give some attention to the solution, the correct solution, of a problem that can be solved only by them. A great deal of study and work along this line has been done by competent men. They should have the united support of the profession.

Another instance is found in the relation of the doctor to the prohibition law. Has it occurred to them that a layman is not competent to diagnose disease and to prescribe treatment? And have they taken any action to put the press and public right on this? The mere fact that a physician may have issued numerous prescriptions for whiskey is not evidence that he has violated the law. It must be shown that he issued them to persons who were not sick, or for conditions in which whiskey is not indicated, or without examination, etc., etc. I have no quarrel with the prohibition enforcement officers. I believe in enforcing the laws that are placed upon the statute books, and with their limited force their job is difficult at best. But there has been such a constant cry in the newspapers about "wet doctors" and "booze doctors" and "crook

doctors," that the public now seems to believe that all doctors are crooked. I do not say that some doctors have not violated the law. Knowing human nature to be what it is, I presume some of them have. But I do not *know* that they have, and it is impossible for anyone to know without a thorough investigation, and a careful consideration of all the facts in each case.

One's personal opinion as to the efficacy of alcohol does not enter into this discussion. *The law recognizes it as a medicine in certain instances, and lays down rules for its use.* The fact that whiskey has been much abused should not prejudice one against it, if rightly used. Abuse always occurs when the people resort to self-medication, as many formerly did with whiskey. It is difficult to understand, however, how any sensible doctor can inveigh against the medicinal value of whiskey, *administered according to the doctor's directions*, when a comparison is made of the records of the army camps which used it with those that did not.

Another factor which must be given consideration is the psychic side of treatment. Rightly or wrongly, whatever the individual doctor's opinion, the laity believes, and has believed for a long time, that whiskey is a sovereign remedy for common colds. In some instances this is so much the case that some patients do not think that anything is being done for them when whiskey is not given, and other remedies only are prescribed. No one will deny, I believe, that absolute lack of faith in the medicine taken is a serious disadvantage to any patient.

The situation is somewhat similar to that described relative to narcotics. A doctor is the only one competent to make a diagnosis and prescribe treatment. Therefore, the mere act of writing a prescription is not evidence of law violation. The attendant circumstances must be considered. Therefore, is it not up to our leaders to take some action to lessen this indiscriminate maligning of the doctors? The poor doctor has enough burdens to carry, and any adverse publicity, even though subsequently refuted, is more fatal to his material welfare than it would be to any other business or profession.

Another illustration of their lack of attention to the needs of the profession is found, I think, in their failure to make the profession solid with the public on account of our services in the war. The Japanese first showed the absolute

need to any army of a well organized medical corps. What would our army have been without the medical men? Does the general public know anything of the medical men's service? It does not. We hear a great deal about the engineers, and the flyers, and the artillery, etc., etc., but, outside of medical journals, nothing of the doctor. *The public does not read medical journals. Many medical men do not.* Possibly there is no provision for such publicity, but there ought to be. The "Christian Scientists," already having the best lobby, have now engaged, it is rumored, several noted screen stars to produce "Christian Science" movie plays. Eternal vigilance is the price of safety. The medical profession must recognize that truth, and act upon it, if it is to survive.

536 Rush St.

What would appear to be markedly improved health conditions and lowered mortality rates among industrial workers is shown by figures recently issued by the Metropolitan Life Insurance Co. These figures show that for the first nine months of 1920 the death rate among nearly 13,000,000 insured wage-earners was 10.2 per 1,000, or nine per cent lower than for the corresponding period of 1919.

A notable feature of the studies made was the low death rate for tuberculosis. Also as compared with the same period last year the mortality rate was much lower from influenza, pneumonia, typhoid fever, diarrhea and enteritis and Bright's disease.

It is related that John Quincy Adams, the sixth President of the United States, walking one day in the streets of Boston was greeted by a friend who said, "I am glad to see you, sir, and how is John Quincy Adams today?"

"Thank you," the venerable ex-president, then in his eighties, replied, "John Quincy Adams himself is well, sir, quite well. But the house in which he lives at present is becoming dilapidated. It is tottering upon its foundation. Time and the seasons have nearly destroyed it. Its roof is pretty well worn out, its walls are much shattered and it trembles with every wind. The old tenement is becoming almost uninhabitable and I think John Quincy Adams will have to move out of it soon. But he himself is quite well, sir, quite well."

Bulletin, Chicago Department of Health.

Society Proceedings

ALEXANDER COUNTY

The following officers of the Alexander County Medical Society were elected December 23, 1920: President, Chas. L. Weber; vice-president, H. A. Davis; secretary and treasurer, B. S. Hutcheson; delegate, O. M. Dickerson, all of Cairo; alternate, J. E. Gause, Unity, Ill.

JAS. S. JOHNSON,
Secretary and Treasurer.

CHRISTIAN COUNTY

At a meeting of the Christian County Medical Society held at the Antlers Hotel, Taylorville, Ill., January 24, 1921; those present at the earlier part of the meeting were rewarded in the enjoyment of a very pleasant dinner, after which the meeting adjourned to the office of Dr. T. A. Lawler, where the business part of the meeting was taken up, with Dr. Lawler, the president, in the chair. Drs. O. H. Louder of Stonington and F. A. Martin, formerly of Shelby County but now of Pana, were elected to membership.

Election of officers resulted as follows: President, Walter Burgess, Pana; vice-president, S. B. Herdman; secretary-treasurer, D. D. Barr; delegate, G. L. Armstrong; alternate, T. A. Lawler; member legal committee, J. N. Nelms, all of Taylorville; member public health committee, W. H. Mercer, Taylorville, and J. H. Miller, Pana; censors, Drs. Lawler, Mercer and Nelms.

Various matters concerning the good of the society were discussed and a plea for the careful examination and record of the findings of all the returned soldiers who are found to be disabled made so as to avoid the great difficulties and delays that fell to the lot of the soldiers of the rebellion and later wars.

Inquiry was made as to the condition of Dr. D. F. Morton of Taylorville, who is now confined to a hospital in Philadelphia, and it was unanimously ordered that the secretary send a telegram to Mrs. Norton expressing the anxiety of the society and to give our good wishes to the patient.

This was the best meeting we have had for several months.

D. D. BARR,
Secretary-Treasurer.

COOK COUNTY

CHICAGO MEDICAL SOCIETY

Regular Meeting, January 12, 1921

1. "Tumors of the Breast from the Standpoint of the General Practitioner and the General Surgeon".....Arthur Dean Bevan
Discussion: Dean Lewis, A. B. Kanavel,
L. L. McArthur.
2. "Digitalis, Its Clinical Application".....
.....S. M. White, Minneapolis, Minn.

Joint Meeting Chicago Medical and Chicago Urological Societies, January 19, 1921

1. "Surgical Treatment of the So-Called Ulcer of the Bladder".....Herman L. Kretschmer
2. "Presentation of a Case of Prickle Celled Carcinoma of the Penis Treated by Diathermy and Radium".....B. C. Corbus and C. W. Hanford
3. "Nephrosis, Nephritis and Pyelitis".....
.....Gustav Kolischer

Joint Meeting of Chicago Medical Society and the Robert Koch Society, January 26, 1921

1. "Some Observations on Tuberculosis, Aortitis, Hypertension and Nephritis, as Revealed by the Investigations of the Henry Phipps Institute".....H. R. M. Landis, Philadelphia
Discussion: Frank Billings, Capt. F. L. Beals, U. S. A., Wm. A. Evans.
2. "The Focal Reaction with a Special Reference to Tuberculosis".....William F. Petersen
Discussion: D. J. Davis, Robt. H. Babcock.
3. "Pregnancy and Pneumothorax in the Tuberculous Woman".....Ethan Allen Gray
Discussion: Joseph B. DeLee, Rudolph W. Holmes.

THE CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY

A regular meeting of the Chicago Laryngological and Otolological Society was held November 3, 1920.

The president, Dr. Albert Lewy, in the Chair.

Demonstration of Cases

DR. OTTO STEIN reported a sebaceous cyst of the mouth and exhibited the patient and the cyst. This case was first seen by Dr. Stein three or four months ago. A young woman appeared at the hospital with her mouth so full that she could scarcely talk or swallow. At that time, about the middle of July, she was beginning to have difficulty in swallowing and great interference with speech. She had very little pain, only from the inconvenience from the size of the growth. Examination showed a mass in the floor of the mouth, which was a smooth symmetrical swelling. There was no inflammation, no particular soreness, and it felt cystic. The mass pushed the tongue up to the roof of the mouth, and below the chin in the sublingual region was a similar swelling which on palpation one could readily feel was a part of the mass in the mouth. The tumor was about the size of a small orange. The speaker was not sure whether it contained fluid or not. He decided to use a local injection and make an incision in the floor of the mouth, which he did under 1 per cent. procain which gave very good anesthesia. After making the incision through the mucous membrane only, he came down upon the sac and started to dissect it, but found it was too large to remove that way unless he emptied the contents through a small

incision. Opening the sac readily revealed the contents to be sebaceous material. All of it was practically scooped out before any attempt was made to remove the sac; otherwise, he would have had to enlarge the incision considerably. The dissection was very easy, and the cyst was removed through a small incision. He exhibited the mass he removed in its entirety, containing whatever sebaceous material was left. There was a narrow prolongation in the median line in the submental region. Cysts of this type may appear anywhere along the branchial cleft.

DISCUSSION

DR. JOSEPH C. BECK asked how many of these cases Dr. Stein had found in the literature.

DR. J. HOLINGER asked whether the sublingual salivary glands were implicated, did they discharge any saliva or were they obstructed.

DR. ROBERT SONNENSCHNEIN asked whether the cyst contained any hair.

DR. STEIN, in replying to Dr. Beck, stated he had not gone into the literature of the subject. Dermoids of the mouth were not uncommon. This was the second one he had seen; the other one was not of this type. This one contained only sebaceous material, and had no connection with any salivary mucous gland.

DR. G. W. BOOT demonstrated a case of brain abscess. The patient was a man aged 24 years who fell from a high-chair when nine months old and had a hemorrhage from the right ear, with continuous discharge since that time. He served in the Army for two years.

August 27, 1920, he entered the Presbyterian Hospital with an otitis externa. The abscess was opened and the patient went home the following day. September 4th he returned complaining of headache, dizziness, nausea and vomiting, stiffness of the neck and slight earache. He was slightly delirious and constipated. A spinal puncture revealed a cloudy fluid, with 6250 cells; small diplococcus questionable. The cultures remained sterile after seventy-two hours. He was seen on September 5th and a diagnosis of meningitis secondary to a chronic discharge of the ear was made. A mastoid operation was performed and a large cholesteatomatous mass was found in the left antrum. The tegmen seemed softened; the dura was incised and clear fluid found. The temporo-sphenoidal lobe was incised and a thin, greyish turbid fluid with broken down brain tissue escaped. A drainage tube was inserted after the sinus had been exposed and found normal; the wound was tamponed. The patient had a stormy convalescence until September 19; on the 21st, sixteen days after the first operation, a probe was passed up the path of the drainage tube and thick pus was removed, which contained colon bacilli and pneumococcus on culture. After that the headache disappeared and patient felt fine and only complained that he could not go home. On September 26th he was permitted to go home as there was no longer any drainage and the wound was granulating nicely.

The temperature before the operation was 101.8° f., at operation 100°, and most of the time was subnormal up to the time of the drainage.

The case was presented at this time because the otologists are divided as to the advisability of operating on these cases. One group said one should not operate on meningitis, another said not to operate on a brain abscess in the initiatory stage or in the terminal stage. This patient in the beginning stage of brain abscess had been operated. Dr. Boot had repeatedly operated on patients in that stage and they recovered. He felt sure the attitude taken by the men at the Mayo clinic was wrong—just like the men who said not to operate on an appendix until there was a well walled off abscess. He has now operated upon eight temporo-sphenoidal abscesses and had four recoveries, and had operated on three cerebellar abscesses, with one recovery.

DR. JEROME F. STRAUSS, presented his membership thesis, entitled: "Accidents in Aural Paracentesies."

(Abstract)

A severe hemorrhage from the ear, necessitating actual hemostatic measures for control, and a similar case with a less severe but continuous loss of blood for a period of several days, following incisions in the tympanic membrane for acute purulent otitis media, led Dr. Strauss to search otological literature with the idea of obtaining some information regarding the frequency of such cases. He found less than twenty references to the subject. The accidents in the early days of paracentesis were many and varied. The records are meagre and inexact, and in the light of present day knowledge, were practically entirely due to infections and the crude instrumentation of the time. Secondary infection of the ear cavity was a frequent occurrence in those cases in which the paracentesis was performed to relieve deafness. After reviewing the literature the author stated that the anatomical changes necessary to produce these accidents are not many. A congenital absence of thinning of the bony capsule of the bulb may exist or the condition may be acquired through metabolic disease in the early developing years of life.

The following cases were reported: *Case 1*: C. S., aged 8 years, after thirty-six hours of acute earache had been taken to a physician's office where, after otoscopy, a paracentesis was performed. There was an immediate gush of blood from the auditory canal, and the operator hastily inserted a firm wad of cotton and took the patient to the hospital. When seen by Dr. Strauss blood was steadily oozing through the temporary packing. On removal of the cotton wad the gushing of venous blood was resumed, and the only course to pursue was immediate, firm re-packing of the canal. This served to control the bleeding and the patient made an uneventful recovery. Subsequently the patient was examined by Dr. Incr. Abt, who was able to demonstrate a Harrison's groove, some deformities of the heads of the long bones and the remnants of a rachitic rosary.

Case 2: B. D., aged 7 months, was brought to the hospital forty-eight hours after a paracentesis, during which period he had continued to ooze a slow but steady drip of blood from the ear. The little canal had been packed with gauze twice without success, and the condition was becoming serious. Pallor was marked and the pulse was rapid. An adrenalin soaked tape was inserted deeply into the canal, and tightly packed. This treatment evidently slowed up the hemorrhage, for although the packing was blood soaked in a few hours there was no further bleeding. Subsequent history and examination revealed the fact that the patient was a hemophilic. There was a good recovery after treatment with horse serum and a course of calcium internally.

DISCUSSION

DR. OTTO STEIN said he did not think one could lay too much stress on the possibility of a hemorrhage occurring in any case of incision of the drum membrane. Such cases had been reported from time to time, and those who were experienced in otology were constantly on the lookout for such a possibility. Therefore, this paper was of extreme interest at any time in emphasizing the care one should exercise in performing the operation of incision of the drum membrane. This condition of the floor of the middle ear, where there was no bone proper, and the jugular bulb presented prominently, was more commonly found in children in whom there was an acute condition of the middle ear. Dr. Stein was particularly interested in the arterial type of hemorrhage. Venous hemorrhages could be readily detected and recognized on account of the character of the blood escaping, but the arterial cases were far more rare.

There was another class of cases where there was a terrific hemorrhage from cutting, and this was where there was a malignant growth in behind. Of course, there was destruction of part or all of the drum at the time, but in incising or curetting this mass at the bottom through the canal, alarming hemorrhage might take place from the erosion the growth had produced around the carotid artery, with severe hemorrhage following.

DR. JOSEPH C. BECK recalled the thesis he wrote on the only case on record, so far as he knew of primary actinomycosis of the middle ear. He had observed the case in the Allgemeiner Krankenhaus in Prague from the beginning. The patient came in with the diagnosis of otitis media. Subsequently Dr. Hektoen of this city and the speaker worked on it from a pathologic point of view, examining the yellow bodies that were discharging from the mastoid wound which proved to be actinomycetes. This case progressed and terminated in a fatal hemorrhage from the ear.

The remarks made by the previous speaker with reference to erosion from growths were also applicable to his case for erosion from osteitis of actinomycotic origin followed. A post-mortem examination was made, and they studied the temporal bone which was excised and made serial sections of it, especially in the vicinity of the ruptured internal carotid artery, which was from an erosion caused by the actinomycotic process. The erosion occurred in the carotid canal and just at its relation to the Eustachian tube.

The point in this case was the treatment of the hemorrhage. The patient did not die from the immediate hemorrhage that occurred from the ear. He was not able to control the hemorrhage from the Eustachian tube. It was necessary to do a ligation of the carotid; then the patient lived for a little while longer, but it was the tremendous loss of blood at the time of the first hemorrhage that killed the patient.

EFFINGHAM COUNTY

The annual meeting of the Effingham County Medical Society was held December 14, 1920, in the library room of St. Anthony's Hospital, in Effingham, at 2 p. m., with Dr. H. Taphorn, president pro tem.

The election of officers for the ensuing year resulted as follows: President, F. N. A. Hoffman, Effingham; first vice-president, E. A. Bing, Altamont; second vice-president, C. H. Diehl, Effingham; secretary, F. Buckmaster, Effingham; treasurer, H. C. Heuck, Sigel; delegate to the State Society for 1921, S. F. Henry, Effingham; alternate to the State Society for 1921, J. C. R. Wettstein, Effingham; medico-legal committee-man, C. F. Burkhardt, Effingham; censor for three years, C. M. Doty, Edgewood.

It was moved by Dr. Hoffman and seconded by Dr. Heuck that the 1921 meetings of this society be held at St. Anthony's Hospital in Effingham, except for any special reasons preventing, and that they be clinical as they have been for the past six months. Approved.

The society then adopted the suggestion of the secretary that we endorse the reappointment of Dr. C. St. Clair Drake, Director of Public Health, and instructed the secretary to write to Governor Small accordingly.

The meeting was then adjourned to the hospital wards where two clinical cases with their discussions were presented as follows: Dr. S. F. Henry then presented a patient, male, 19 years old, who was first seen at his office November 30, complaining of severe pain in the left ear; he had not slept for three nights. His temperature was 100 F. and pulse 100. There was tenderness in front of and below the ear, but not over the mastoid process. The drum membrane was perforated and pus was being discharged freely from the ear. Three days later the patient had a chill and the temperature went to 106 F. with pain more severe and extending down the back of the neck. The temperature became normal the next day and remained so for the next four days, then gradually rose until it reached 104 F. The mastoid process had become painful and tender and on December 10 the corresponding mastoid was operated on. For the next 24 hours the temperature was normal, but at the end of 36 hours the patient had a severe chill with fever reaching 104 F. and with severe pain over the left sacro-iliac region. Twelve hours later a distinct mass, inflammatory in type, was observed at the point of sacro-iliac pain. At the end of the next 24 hours this mass was opened and discharged a free amount of thick pus. Chills, fever, and sweats continued for the next three days, then the temperature became normal and remained so. (This patient's improvement continued and he made a good recovery.)

Dr. F. Buckmaster then presented a case of syphilis of the left lung following traumatism in a man 59 years of age, who had been injured November 21, 1920, by about 25 sacks of cement falling on him, crushing him through the region of the left chest, back and right thigh especially. The patient was unable to

stand or walk at the time and was seen immediately by his physician, who found him suffering severely from pain in the above-named regions, especially in the back and left chest. His physician found four ribs fractured in the left lateral area, but there were no other fractures, no paralyses, the spine was not injured, there was no bloody urine, no vomiting or other evidence of abdominal injury and no evidence of hemorrhage except that the patient expectorated a little bloody sputum at times for the next three days. He coughed a little at times.

Fever (101) first appeared on the 24th after his injury on the 21st. His fever reached 102.5 on the 25th day of his entrance into the hospital. With this increase in temperature he coughed and expectorated rather freely, his breathing became much more labored and rapid, the left chest laterally and posteriorly became quite dull on percussion at the lower portion and the patient seemed severely ill.

At our examination we found the family history showing parents, two brothers and three sisters dead, but from various ordinary diseases and accidents. His past history was negative except that he had had "bilious spells" frequently for years and some selective food distress. He denied venereal diseases and had never used tobacco or liquor. The patient was sitting propped up in bed, breathing 26 to 30 times per minute and coughing and expectorating a heavy material quite often and was very tired and weak. Has had no headaches. Vision of right eye destroyed by injury five years ago. Has pyorrhea and several decayed teeth. Head, neck and spine negative as to injury. The chest shows no deformities except for a prominence centering over the sixth left rib in the lateral region, which is one of the four broken ribs. This was somewhat tender but contained no air. The left deep back muscles and those over the lower left chest posteriorly and laterally are quite rigid. The injury involved the left chest from the fifth rib downward in the lateral area. The right lung is functioning normally but the action of the left lung is quite restricted except in the apical area which shows no dullness and is functioning comparatively normally. The lower half is quite dull on percussion, especially in the back and quite low down, but there is no flatness and vocal fremitus is quite increased. There is no fluid in the pleural cavity. The breath sounds are deficient, tubular especially in patches and at the bottom of the lung there are patches in which fine moist rales are heard. The pneumonitis is most marked at the very bottom of the lung in the back growing less in the upward direction, the upper third being uninvolved, and grows less in the lateral and front areas so that the front of the lung proper is very slightly involved near the base. The heart rate is 84, regular, the aortic and heart outlines are much increased with moderate diffusion of the heart impulse, with soft and distant tones, but there are no bruits, thrills or shock. The abdomen, genitals, rectum and extremities seem negative. He is mentally and neurologically negative. His blood pressure is 80-155.

Discussion: The fifth, sixth, seventh and eighth left ribs in the lateral region were fractured by a crushing force. The lung may have sustained an injury by the crushing force or by puncture by one of the broken rib ends, but the fact that there is no blood or other fluid in the pleural cavity and that there is no emphysema indicate that there was no lung perforation by a broken rib, but the fact that he did expectorate a little bloody sputum for the two or three days following his injury indicates a moderate compression injury of the lung structure. The rise in temperature came at the time most often seen in septic complications. As to the lung there is a pneumonitis of the base especially in the back and especially patchy in its intensifications which is not of the lobar type but conforms to (a) the septic type of pneumonitis following traumatism and (b) acute syphilitic interstitial pneumonitis, especially in that it is definitely patchy, involves in greatest intensity the back of the lung at the lowest portion. The lung involvement then is a secondary pneumonitis in a lung previously suffering evidently rather a minor form of injury and is either septic or syphilitic.

He is suffering a chronic aortitis with much widening in outline of the aorta and a chronic degenerative myocarditis with much heart enlargement, both of the type so commonly caused by chronic syphilitic involvement of these parts.

The urinary examination was negative, the sputum showed no tubercle bacilli, but did show a few pneumo-, staphylo- and micro-cocci. Blood counts practically negative.

Screen examinations and stereoscopic plates of the chest confirm the finding of the very wide ascending aorta and the large heart and show in addition all lung tissue appearing negative except the lower half or two-thirds of the left lung which shows the shadows of consolidation most intense at the base and posteriorly together with the rib fractures.

This patient was put on heavy doses of quinine hydrobromide and salol, together with fresh air and a supporting diet but his fever continued upward until in two days after entrance it reached 104.5. At this time the former medicines were discontinued and the patient placed on 20-grain doses of iodide of potash every four hours followed by a glass of milk. The next day after beginning the iodides the temperature reached a maximum of 102, and on the second day a maximum of 100, and following that time he had a normal temperature, his cough and expectoration rapidly cleared up and the lung itself rapidly returned to practically normal conditions, and the patient after walking around in the hospital for eight or ten days was discharged December 18, at that time taking 180 grains of iodide of potash each day, with the involved lung practically clear and his strength rapidly recuperating.

This is one of a series of over twenty cases of active syphilis of the lung positively identified in our work here in the last year and a half. This, then, was a case of acute syphilitic interstitial pneumonitis,

immediately preceded and evidently activated by a minor compression injury of the lung, the first one in our series immediately activated by traumatism. This case, as in several instances in our series, rapidly took on the aspects of a severe illness with high fever but was especially puzzling in a diagnostic way because of its appearance just when septic pneumonitis with its rising temperature would be most expected in relation to lung injury. In one of our acute syphilitic pneumonia cases coming on the third day after a cholecystectomy, the temperature reached 105 and the respirations 65 within twenty-four hours after these symptoms began and with heavy doses of iodide of potash every four hours the maximum temperature the next day was 100 and the respirations practically normal and these lung changes cleared up as if by magic.

Syphilis should always be suspected in involvements of the posterior and base of the lung particularly, and these acute cases may be very severe in their onset and are almost always unilateral; in fact syphilis of the lung in the large majority of cases even though very chronic is unilateral and is in the back of the lung and most intense at the base.

F. BUCKMASTER,
Secretary.

MADISON COUNTY

Our December Meeting

The Madison County Medical Society met at the Y. M. C. A., in Alton, on December 3, 1920, with Dr. F. O. Johnson, president, in the chair.

Twenty-seven members and five visitors were present.

The secretary was instructed to buy 500 Christmas Seals as a contribution from this society. The secretary announced a donation of \$100 from the Madison County Chapter of the American Red Cross at Edwardsville. A donation of \$100 will be made every month during the coming year. The secretary also reported the receipt of \$50 from the Liberty Prairie Branch of the Red Cross to be used in the tuberculosis work in the county.

The expulsion of Dr. L. H. Hayes, of Alton, from the "American Legion" was announced, and upon motion of Dr. Wahl, duly seconded and carried, a committee consisting of Drs. Robertson, Pfeifferberger, Wahl and Walton, was appointed by the chair, to draft charges against Dr. Hayes.

Dr. R. B. Scott of Venice asks that the action of this society in March, 1920, by which he was suspended for one year be rescinded. On motion of Pfeifferberger, duly seconded and carried, this matter was made a special order for our January meeting, and Dr. Scott was invited to appear before the society at that time.

The annual election of officers resulted as follows: President, Dr. E. F. Wahl, of Edwardsville, Ill.; vice-president, Dr. A. F. Kaeser, of Highland, Ill.; secretary, Dr. E. W. Fiegenbaum, of Edwardsville; treasurer, Dr. J. A. Hirsch, of Edwardsville; state delegate, Dr. M. Pfeifferberger, of Alton; alternate,

Dr. L. G. Burroughs, Collinsville; medico-legal member, Dr. J. B. Hastings, of Alton; member board of censors, Dr. W. H. C. Smith, of Godfrey, to serve three years. By vote it was ordered that the officers of the Madison County Medical Society are hereby declared to be officers of the Madison County Anti-Tuberculosis Association.

Dr. F. O. Johnson, the retiring president, in a neat little speech introduced the newly-elected president, Dr. E. F. Wahl, who, taking the chair, pledged his best efforts for the success of the organization, calling upon all members to be more regular in their attendance upon our monthly meetings.

Dr. Groves B. Smith, of Godfrey, then read a very instructive paper upon "Mental Mechanisms," for which he was given a rising vote of thanks.

Adjourned to meet in Edwardsville, on the first Friday in January, 1921.

Our January Meeting

The Madison County Medical Society met at the Court House in Edwardsville on the afternoon of January 7, 1921, with President Dr. E. F. Wahl in the chair.

Twenty-one members and four visitors were present.

Dr. B. F. Jones, of Granite City, was elected to membership.

The Board of Censors in the case of Dr. L. H. Hayes reported progress, but requested further time, which was granted.

Dr. R. B. Scott was present and again asked that the action of this society by which he was suspended be rescinded. After some discussion bearing upon both sides of the question, Dr. Pfeifferberger moved that no action be taken. The motion prevailed.

Dr. H. P. Bierne spoke upon medical legislative matters and urged all members to respond promptly when called on to use their influence in promoting medical interests before the legislature.

Dr. Bierne then gave a very interesting address on "The Physics and Use of Radium," which was well received and caused considerable discussion. On motion a rising vote of thanks was tendered the distinguished speaker.

Adjourned to meet in Granite City on the first Friday in February, 1921.

Personals

Dr. F. J. Maciejewski was elected president of La Salle County Tuberculosis Society.

Dr. Samuel E. Parr has been elected physician of La Salle County to fill the unexpired term of Dr. Albert J. Roberts, resigned.

Dr. Charles E. Humiston of Chicago delivered an address on "The Need of Better Medical Organization" before the Elgin Physicians Club, January 10.

Dr. Norman Bridge, whose recent illness gave rise to alarming rumors, writes from Los Angeles that he is improving and looking for ultimate complete recovery.

Dr. S. L. Gabby resigned as president of the Elgin Anti-Tuberculosis Society. Under his management the free clinic for tuberculosis treatment was established.

Dr. Henry F. Helnholtz has moved to Rochester, Minn., to assume the position of professor of pediatrics in the Mayo Foundation and head of the section of pediatrics in the Mayo Clinic.

Dr. Frank P. Stedem, Saybrook, was severely injured in an accident at a crossing of the Lake Erie & Western Railroad January 12. Both feet were so badly crushed that amputation was necessary.

Drs. C. D. Thomas, F. M. Meixner, W. B. Eichler and O. W. Simpson were elected members of the executive board of the Peoria County Tuberculosis Association at the recent annual meeting.

News Notes

—Peoria physicians have a plan under way for a telephone exchange system to forward calls in emergency.

—Dr. Milton Jacobs, medical director of Rest Haven Sanatorium, Elgin, is conducting mental hygiene clinics in conjunction with the Elgin Free Dispensary.

—The city of Elgin is making provision for a special class for feeble-minded children in one of the public schools and another class for backward children is under consideration.

—It is reported that the Illinois prohibition officers' charges against Dr. E. P. Murdock and Dr. Eldorado Scott of Chicago were withdrawn without prejudice.

—Charges made by Alderman Max Adamowski against the management of the Municipal Tuberculosis Sanitarium of Chicago were withdrawn after a personal investigation.

—The Belleville branch of St. Clair County Medical Society elected the following officers: President, Dr. W. A. Dew; secretary, Dr. Edmund Bechtold; treasurer, Dr. D. R. Ducey.

—A committee of Chicago men and women have purchased the Woman's Hospital and organized the Illinois General Hospital and Cancer Research Foundation and with plans for a very large institution eventually.

—The United States Civil Service Commission announces an examination for bacteriologists and associate and assistant bacteriologists. Blank applications can be secured from Washington or from the Chicago or other local offices of the commission.

—The U. S. Public Health Service contemplates the erection at Peoria of a laboratory substation for analysis of waters of the Illinois River and other streams within the state. The site for the new station has not been chosen, but it is anticipated that it will be somewhere near the Union Station, as the water for analysis must be brought in tank cars.

—At a joint meeting of the Chicago Medical Society and the Robert Koch Society, held January 26, Dr. Henry R. M. Landis, Philadelphia, delivered an address on his observations on tuberculosis as revealed in investigations at the Henry Phipps Institute. Before the meeting an informal dinner was given at the University Club by members of the societies in honor of Dr. Landis.

—The Physicians' Radium Association of Quincy was organized recently by physicians of that city and will be incorporated as a stock company under the laws of Illinois. The object of the organization is to purchase radium, to make a study of its remedial properties, and to apply these in practice, and it is empowered to establish and maintain a hospital. Dr. Harold Swanberg was elected managing director.

—The Fifth Annual Session of The American Congress on Internal Medicine will be held at Baltimore, Md., week of February 21-26, 1921. The activities of the Congress will be largely clinical. Ward-walks, laboratory demonstrations and group or amphitheater clinics will be conducted daily by members of the medical faculties of The Johns Hopkins and the Maryland universities. Further information may be secured by addressing the Secretary-General, 1002 N. Dearborn St., Chicago, Ill.

—A committee has been appointed to undertake a campaign for the collection of a fund

of \$500,000 for the endowment of two memorials to the work of the late Dr. Henry Baird Favill. It is proposed to create a Henry Baird Favill Memorial Laboratory, with fellowship endowments, in St. Luke's Hospital, to the interests of which Dr. Favill devoted many years of special effort. For this purpose a fund of \$250,000 is solicited. A like sum is desired for the establishment of the Henry Baird Favill Foundation, the income of which shall be used in perpetuity for the promotion of public instruction in health and hygiene. Mr. Edgar A. Bancroft is chairman, and Mr. N. D. Sibley is secretary of the committee. The Merchants Loan & Trust Company, 112 West Adams street, will act as treasurer of the fund.

—A section of the new building of St. John's Sanatorium, located on a farm near Springfield, which was opened January 1, has been assigned to the care of crippled children. This work will consist largely in the after-care and reeducation of victims of poliomyelitis and will be under the supervision of Dr. Clarence W. East, chief of the division of child hygiene and public health nursing of the State Department of Public Health.

—In the will of Dr. N. S. Davis are the following bequests for Chicago medical organizations: To the Society of Medical History of Chicago, the microscope and stethoscope of his father; the microscope is said to be the first one brought to Chicago. To Rush Medical College, a microscope presented to Dr. Davis by the students of Rush Medical College. To the Northwestern University, after the death of Mrs. Davis, the sum of \$5,000 to be used in establishing a library of zoology, to be known as the N. S. Davis Memorial Library of Zoology. To the John Crerar Library, after the death of Mrs. Davis, the sum of \$5,000, to be used in purchasing books on the heart and lungs for a special collection, to be known as the N. S. Davis Library of Medicine.

Marriages

DANIEL H. LEVINthal to Miss Gertrude M. Coski, both of Chicago, December 19.

CHARLES HENRY SWIFT to Miss Juliana Streid, both of Washington, Ill., December 25.

JOHN RILEY MERRIMAN, Springfield, Ill., to Miss Dorothy Carroll of New York, October 27.

Deaths

WILLIAM S. BELLWOOD, Abingdon, Ill.; Rush Medical College, 1895; aged 54; died December 14.

EUGENE F. McLAUGHLIN, Chicago; Bellevue Hospital Medical College, 1885; aged 60; died December 26 from myocarditis.

MARY A. SEYMOUR BRECKINGTON, Chicago; Hahnemann Medical College and Hospital, Chicago, 1882; aged 82; died January 17.

DAVID W. WILKINS, Chicago; Hahnemann Medical College and Hospital, Chicago, 1897; aged 54; died January 1 from pernicious anemia.

SEYMOUR A. WOODWORTH, Park Ridge, Ill.; Hahnemann Medical College and Hospital, Chicago, 1895; aged 51; a Fellow A. M. A.; died January 9.

JAMES H. McDONALD, Chicago; Chicago Medical College, 1876; aged 69; a Fellow A. M. A.; for twenty-five years city school physician; died January 21.

WILHELM D. FRENZ, Chicago; Chicago Medical College, 1896; aged 62; a member of the Illinois State Medical Society; died December 9 from carcinoma of the bladder.

JOHN CLIFTON BIRD, Danville, Ill.; University Medical College, Kansas City, Mo., 1900; aged 52; chief surgeon of the National Soldiers' Home, Danville; died December 23, from nephritis.

WILLIAM ABRAHAM DAWSON MONTGOMERY, Chicago; University of Toronto, Ont., 1881; aged 60; for twenty years a member of the staff of Passavant Hospital, Chicago; died January 1 from heart disease.

HUGO E. WANGELIN, Belleville, Ill.; University of Minnesota, Minneapolis, 1891; aged 52; a Fellow A. M. A.; also a dentist; president of the local board of education for five years; died January 13 from pneumonia.

LEWIS F. TAGUE, Belleville, Ill.; University Medical College of Kansas City, 1909; aged 47; a member of the Illinois State Medical Society; died in St. Vincent's Hospital, St. Louis, December 17, from an accidental gunshot wound.

JEREMIAH H. STEALY, Freeport, Ill.; Jefferson Medical College, Philadelphia, 1882; aged 61; a Fellow A. M. A.; at one time attending physician and surgeon to St. Francis and Globe hospitals; died at the University Hospital, Ann Arbor, Mich., January 10.

JOHN ERASMUS HARPER, Chicago; University of the City of New York, 1878; aged 69; a Fellow A. M. A.; emeritus professor of diseases of the eye in the College of Physicians and Surgeons, Chicago; at one time editor of the *Western Medical Reporter*; died January 8 from myocarditis.

WILLIAM ALLEN PORTER, Chicago; Kansas Medical College, Topeka, 1899; Rush Medical College, 1901; aged 50; a Fellow A. M. A.; clinical professor of otology and rhinology in Loyola University School of Medicine, Chicago; captain, M. C., U. S. Army, and discharged, February 6, 1919; died January 8 from cerebral hemorrhage.

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Original Articles

THE SPECIAL FIELD OF NEUROLOGICAL SURGERY AFTER ANOTHER INTERVAL

(Continued from page 141)

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From this small beginning it has come about that hypophyseal disorders are now recognized almost as often as those of the thyroid, and there is no reason to believe that one of these two glands is affected by disease any oftener than the other, though in view of the exposed seat of the thyroid the diagnosis may be read from afar.

In March, 1909, I first ventured to operate for a pituitary tumor in a case of acromegaly, employing a modified transphenoidal approach to the sella, the result of abundant studies on the cadaver. The procedure was merely a further development of the operation by way of the nose first used in its crudest form by Schloffer, the chief modifications making it possible to avoid nasal deformity and to lessen the likelihood of a postoperative infection. The case was a fortunate one¹⁴ and led me to develop the operation by this route still further, though fully aware of its limitations, for it is only appropriate to those cases in which there is a wide dilatation of the sella.

At the time of my second address in 1910 there had been 20 cases under observation and the following cautious expression of opinion was given:

No one as yet would venture to assert that a tumor in the infundibular region can be totally removed, and inasmuch as pituitary headaches and pressure against the chiasm may be relieved by a local decompression or by the chance evacuation of a cyst, it would seem wise for the present at least, in view of the importance of the gland, to confine operative measures in most cases to the mere removal of the sellar base with incision of the glandular capsule—a local decompression.

A further statement expressing conservatism was made to the effect that "hypophysial tumors which have extended from the infundibular region into the cranial chamber proper must be treated by the same rules of decompression as would be applied to any equally inaccessible lesion elsewhere."

Time has shown that the former statement was unnecessarily cautious for in most transphenoidal operations a considerable amount of tissue is removed. In the latter statement I was quite wrong, for a subtemporal decompression rarely benefits a patient suffering from pituitary headaches for they are due to local rather than general pressure effects. Hence when an adenomatous gland has penetrated its dural envelope and invaded the cranial chamber, it must be surgically approached from above, if at all, by an osteoplastic exposure of the region.

In a monograph on pituitary diseases, published in 1912, after a general discussion of the subject, my 43 surgically treated cases were recorded. I had had but a single experience at the time with osteoplastic temporal procedures such as Horsley had practiced, and none with the approach from in front by elevating the frontal lobes as originally proposed by Hartley and McArthur.

With our increasing familiarity with pituitary tumors, however, the cases with an indubitable infundibular lesion surmounting a more or less normal sella, which would preclude an operation from below, came to be so often recognized as to necessitate the employment of some osteoplastic measure, and the frontal procedure was given precedence. Since my first case, (Dec. 12, 1913), a considerable number of these operations, occasionally with a gratifying result, have been undertaken. Recently Heuer and Dandy in Baltimore and Adson in Rochester have warmly advocated a development of the lateral approach, first employed by Horsley. Unquestionably there is no one operation suitable for all cases, but I feel that the postoperative complications and high

14. Partial Hypophysectomy for Acromegaly. *Ann. Surg.* Dec., 1909, 1, 1002-1017.

mortality, approximating 40 per cent, which so skillful an operator as Dr. Heuer admits,¹⁵ in view of the scant promise of permanent cure on recovery, will deter others from adopting this procedure.

In general terms, it is my present opinion that when there is a primary pituitary adenoma with enlargement of the sella and signs of implication of the chiasm, the operation of choice is a transphenoidal one. Properly conducted, it is an operation of comparatively low mortality,¹⁶ convalescence is a matter of a few days and the results are often brilliant, with restoration of vision—the main object of the operation—which may be astonishingly rapid. However, as Dr. Heuer points out, it is not an operation which is likely to be repeated with equal success (true enough of any operation) in case the adenoma continues to grow rapidly or has already broken down the dural barriers and invaded the cranial cavity. Under these circumstances, if an operation is to be done at all, it must be from above if there is to be any prospect of preserving or restoring vision, and this—an improvement in vision—not mere operative recovery, is our present criterion of a successful procedure.

It is very doubtful, however, at an early stage of a primary intrasellar adenoma when the conditions are favorable for an operation through the nose whether patients should be urged to, or would be willing to, submit to an operation from above, with its admitted high mortality and likelihood of complications. For it is accompanied by a wide exposure of the brain whose cortex may suffer injury as may indeed the chiasm itself, and the operation furthermore opens the dural barriers so that further enlargement of the growth finds ready access to the region we would wish to protect.

With primary infundibular tumors surmounting, as they often do, a small sella of normal proportions, the problem is entirely different, and I am led to favor with some modifications the

unilateral osteoplastic frontal operation. In the 34 patients with operations of this type (43 in number) there have been only two fatalities, the second and third cases. However, in only 17 of the 34 patients was the lesion disclosed and in not all of them could it be satisfactorily dealt with. In 50 per cent of the cases therefore the nature of the lesion remains uncertified.

In a few cases, nevertheless, the results have exceeded all expectations and it has been possible to enucleate small solid tumors or to empty a cyst and subsequently to detach and draw out its collapsed sac. But I must confess that it is not an operation to be made light of, and I have occasionally added to the pre-existing damage of the optic nerves. Indeed it has been necessary once or twice to divide the functionless one of the pair in order to dislodge the growth. In the case of the pharyngeal-duct cysts, a condition which would seem most favorable, the results have been disappointing, for the cysts promptly refill unless the wall is fully removed.

The fight for vision is the crux of these operations, and after all, the question of proper methods we neuro-surgeons must settle among ourselves, not by writing papers but by seeing one another's cases and attending one another's clinics. Meanwhile neurologists and physicians who have the decision to make may be comforted by the fact that the majority of these operations can be performed with a comparatively low mortality and a degree of symptomatic improvement which is constantly increasing.

Patients with disorders of the ductless glands, of the hypophysis in particular, show more or less characteristic mental attributes not necessarily deviating widely from the normal. I was inveigled once into writing an article on the subject, and whether from this or from some other beginning certain practitioners calling themselves endocrinologists have erected an extraordinary structure of symptomatic complexes based on meagre evidence and a fervid imagination. This has reached its climax in a recent monograph by a distinguished French psychiatrist. There is no way apparently of checking these elaborations, which bear about as much relation to the functions of the ductless glands as did the phrenological imaginings of Gall and Spurzheim to cerebral localization. Epidemics of this

15. Heuer, Geo. J. Surgical Experiences with an Intracranial Approach to Chiasmal Lesions. Arch. Surg., 1, 368-381.

16. At the time of writing my monograph on the Pituitary Body in 1912 there had been 29 transphenoidal operations with four deaths (13.7% mortality). By the time of the Weir Mitchell Lecture (J. Am. M. Ass., Oct. 31, 1914, lxiii, 1515-1525) on Surgical Experiences with Pituitary Disorders there had been to May 12, 1914, 74 of these operations with seven fatalities (9.5% mortality. A review of the cases since then shows an additional 83 operations with eight fatalities (9.8%), making 157 transphenoidal operations in all with a mortality of 12.1% for the entire series.

sort from time to time hysterically sweep over medicine, dying out in due course, the more quickly if unmolested.

Studies on the Cerebrospinal Fluid Circulation

It is true of all intracranial operations that in the knowledge of ways and means of controlling tension lies the chief secret of surgical success. Intracranial over-tension is largely a matter of an increase in the fluid content of the chamber, whether it exists as free fluid in the ventricular and arachnoid spaces or as an edema, a state to which the nervous tissues are particularly prone. Though formerly the extensive withdrawal of fluid was looked upon with apprehension it has come to be an essential step in many craniocerebral operations, during the course of which the fluid, either from ventricles or arachnoid spaces, is not only thoroughly evacuated but may be permitted to drain away during the course of a long operation. There may be ways other than by external drainage of accomplishing the same thing, but to this we will return.

One of the problems which confronts the neuro-surgeon is some method of dealing with the disturbances of cerebrospinal fluid outflow which lead to such malformations and disorders as spina bifida and "essential" hydrocephalus. In the latter condition, operations innumerable have been advocated since the earliest time, none of them proving to be based on correct principles if one may judge from their lack of success in practice. I have always cherished the view that these hydrocephalic conditions were produced by some failure of development of the points of escape for the fluid from the cranial chamber rather than, as was long supposed, from a fault or obstruction at the foramen of Magendie. The fact that in most cases the fluid could be withdrawn from the ventricles by a lumbar puncture, in other words that it had access to the subarachnoid spaces certainly seemed to favor this view.

Some early studies on hydrocephalus were carried out in the Hunterian Laboratory with Walter E. Dandy in 1910-11. It was found possible not only to catheterize the aqueduct of Sylvius but to produce an experimental hydrocephalus by mechanically obstructing it. At the same time some early attempts were made to in-

vestigate the functional activity of the plexuses but we did not get very far with them.¹⁷

It became apparent that it would be necessary to carry our studies to the meninges if we were to find the most likely sources of obstruction. This work was undertaken by Lewis H. Weed in conjunction with Paul Wegefarth in the Surgical Laboratory during my first two years at Harvard. In the introductory notes to the series of reports upon this work¹⁸ a statement of the problems we had set ourselves to solve, so far as time would permit, was as follows:

"... Granting that the chorioid plexuses are the chief source of the cerebrospinal fluid—and this has not been conclusively proved—is the process, as some believe, a transudation, or an actual secretion, or, as Mestrezat regards it, a mere dialyzation from the blood? What conditions activate and what conditions inhibit these chorioidal glands? Have they an internal as well as an external secretion? To what primary diseases are they subject? How early in embryonal life do they secrete? Why does the fluid which they elaborate differ so greatly from that secreted by most other glands? Why are the cells so impermeable to the passage from the blood stream of drugs and of substances such as the bile pigments which in conditions of jaundice quickly stain all other body tissues and fluids?

Granting that the fluid thus secreted by the chorioid plexuses leaves the ventricles and spreads over the brain and down the cord in the subarachnoid spaces, does it receive accessions from elsewhere, from the ependyma or from pituitary or pineal glands? Are there lymph channels in the brain, and if not how does the central nervous system dispose of its products of tissue waste? If there are cerebral lymphatics do they discharge into the subarachnoid spaces and is the subarachnoid fluid therefore of the same character chemically, physically, and cytologically as the ventricular fluid? Why normally is the fluid practically limited to the subarachnoid spaces, and under what conditions does it become subdural?

Granting that fluid may escape by way of the Pacchionian granulations, is this the chief or only manner of escape? If an important avenue, why are these structures lacking in the lower animals and in the human infant? Are these granulations therefore pathological processes, and if so what are their precursors? Are there other means of fluid absorption along the nerves by way of the lymphatics, and if so how important are they? How do the spaces in the pia-arachnoid develop and do the chorioidal glands

17. Dr. Dandy has recently reported the results of these and some more elaborate subsequent studies which he undertook independently. By an ingenious method he has been able to show quite conclusively that the fluid is elaborated by the plexuses without the ependyma taking any part in it. *Experimental Hydrocephalus*. Trans. Am. Surg. Assoc., 1919, xxxvii, 397-428.

18. *Studies on the Cerebrospinal Fluid and Its Pathway*. Journ. Med. Research, 1914, xxxi, 1-176.

mature and secrete before or after their formation? Are there faults of development at these meningeal outlets for fluid which can account for congenital cephalocele? Are there analogies in the fluid circulation of the eye to which we may attribute the disturbances of circulation of the intraocular fluids?"

Weed by adapting the principle of injection of non-granular fluids from which granules might subsequently be precipitated, showed conclusively that the arachnoid villi represent the points of escape for fluid which, by a process of seepage enters directly into the pachymeningeal sinuses. It was, I believe, Wegefard's proposal that in cases of hydrocephalus a series of direct punctures be made directly through the sinuses into the subarachnoid spaces, under the assumption that the puncture holes would become occluded by arachnoid, making thereby new and artificial villi through which fluid might escape.

Weed's continuation of these studies on his return to Baltimore and his demonstration of the manner of development of the fetal arachnoid spaces which I assume (though the point remains to be proved) to take place when the chorioid plexuses first begin to actively secrete, certainly stands as the most important contribution to our knowledge of the meninges since Key and Retzius.¹⁹

If it is true that most cases of congenital hydrocephalus can be accounted for by a faulty development of the villi the rational treatment is to reproduce in some way this channel of outflow either by direct drainage into one of the larger sinuses or by encouraging the formation of new villi in the manner Wegefard suggested, rather than by an attempt to check the formation of fluid.²⁰ At least it is along these lines that our surgical efforts have tended of late years. Certainly no form of drainage into tissue spaces is effective, for by a curious property of the extracranial tissues when they are made edematous by cerebrospinal fluid leaking into them, a smooth endothelial-lined sac ultimately forms which is impervious to the further escape of fluid.

Such a procedure as Dandy has shown to be

19. The Development of the Cerebrospinal Spaces in Pig and Man. Contributions to Embryology No. 14. Carnegie Institution Publications No. 226, 1917, pp. 116.

20. In his more recent paper (The Diagnosis and Treatment of Hydrocephalus Resulting from Strictures of the Aqueduct of Sylvius. Surg. Gynec. & Obst., 1920, xxxi, 340-358) Dandy estimates that 66% of all cases of congenital hydrocephalus are due to Sylvian obstruction. If this is true the agency of obstruction to which we have devoted attention is less common than we had supposed.

surgically possible, namely the excision of the plexus from within the dilated ventricle, can hardly be expected to serve the desired purpose. for if there are any remaining fragments of plexus (and it is a complicated organ) the same degree of tension should recur so long as the ultimate outlets for the fluid are defective.²¹ Possibly no more conclusive argument than that in Weed's more recent paper²² could be given, favorable to the view that imperfect formation or occlusion of the villi is one source if not the most common one of what has been called idiopathic (for lack of understanding of the process) hydrocephalus. By injecting a suspension of lamp-black into the cerebrospinal spaces of kittens, he was able to produce extreme degrees of internal hydrocephalus quite comparable to similar conditions seen in human infants.

At the present moment there are two or three new proposals before us which have a bearing on the cerebrospinal fluid and its spaces, and though admittedly still in an experimental stage, one or all of them may come in time to have considerable importance from a diagnostic as well as therapeutic standpoint.

In a recent paper which has aroused great interest;²³ Dandy has put forth some very definite claims regarding the localizing value in cases of brain tumor, of what he calls *ventriculography*. This is nothing more than the taking of x-ray plates of the cerebral ventricles after their fluid contents have been removed and replaced by air. It is quite certain that in some rare conditions a more exact localizing diagnosis might be made in this way than in any other, and, in the case of tumors situated in silent areas above the tentorium which have led to dilatation as well as deformation of one of the ventricles perhaps only in this way. That the procedure may be sufficiently developed and safeguarded so that it can be routinely utilized for

21. Grave doubts have been expressed by Becht and Matill as to the justifiability of the common assumption that the plexus is an active secretory organ and therefore that there is such a thing as a cerebrospinal fluid circulation. (cf. Frank C. Becht and P. M. Matill, The Amer. Jour. Physiol., 1920, li, 1-173.) If they are correct and we wrong, our entire theorem falls to the ground.

22. The Experimental Production of an Internal Hydrocephalus. Contributions to Embryology No. 44. Publication No. 272, Carnegie Institution, 1919, 425-446.

23. Dandy, W. E.: Localization or Elimination of Cerebral Tumors by Ventriculography. Surg., Gynec. & Obst., 1920, xxx, 829-842.

this purpose is quite within the realms of possibility.

One particularly striking case has been included in Dandy's report, whereby an unsuspected tumor in the right occipital lobe was disclosed, though one must confess that it might have been capable of localization by earlier and more exact perimetry. However, as I have stated, the procedure is in an experimental stage and surgeons may safely leave it in Dr. Dandy's hands to more thoroughly work out its possibilities as well as its hazards, as he doubtless intends to do: and it would be highly desirable under these circumstances for everyone who undertakes the procedure to notify its inventor of their experiences and particularly of their accidents. In this way only will he be able to establish the proposal on a safe basis acceptable to others, as all hope that he may be able to do. That there have already been a goodly number of fatalities, doubtless in the hands of people less expert than the author of the method, is well known. It will soon have a bad repute if so much is expected of it as is given in the author's conclusions, and if the surgeon is encouraged to believe that henceforth he will have less need of exercising his neurological knowledge in localizing brain tumors.

Another procedure likewise in an experimental stage, though capable, it is hoped, of further development, is the diagnostic *puncture of the cisterna magna*, a procedure worked out in the Army Neurological Laboratory under Dr. Weed's direction during the war, and which has subsequently been warmly advocated by James B. Ayer.²⁴ When one realizes how loath the profession was to adopt Quincke's lumbar puncture as a more or less routine measure, one hesitates to say that a suboccipital puncture will not some day come to be as commonly employed. However, even a lumbar puncture is not without risk, as those are well aware who have seen patients with unrecognized cerebellar tumors die from respiratory paralysis soon after one has been made; and the risks of a puncture of the posterior cistern under similar circumstances would be infinitely greater: hence this procedure like the foregoing had best be left in the hands of

its sponsors until they can give us complete details not only of the method but of its diagnostic and therapeutic possibilities, and above all of its hazards.

But probably the most suggestive papers issued by this laboratory during its short life were those by Weed and McKibben²⁵ on the experimental *alteration of brain volume* following the intravenous injection of various substances in solution. They observed that, after the cortex was exposed by a trephine opening, the intravenous injection of a watery solution caused the brain to protrude through the opening, and contrariwise that a hypertonic salt solution caused it to recede, sometimes to a very extraordinary degree.

That these observations had great possibilities of clinical application was immediately apparent to all, and Dr. Foley and others in my clinic have made it a matter of special study.²⁶ They found in the first place it would answer almost as well to give sodium chloride by mouth and it is at times quite amazing to see what an immediate symptomatic effect, particularly when there is increased intracranial tension, this simple procedure may have. That it is not entirely free from risk we have reason to know, but that it has great future possibilities of application we nevertheless are encouraged to believe, though here again it is a matter of slow painstaking observation on the part of a single group of people rather than indiscriminate observations on the part of many, which in time will establish its therapeutic and diagnostic possibilities and risks. As has been realized for a long time, the application of physico-chemical knowledge to the problems relating to the nervous system promises large returns and Weed and McKibben's studies lie in this direction.

It would be premature to pass upon the future role, which any one of these three measures I have mentioned, may come to play. Let us hope that they will not suffer a wave of wild popularity, to be cast off like von Bramann's callosal puncture, as good for nothing, simply because it could not do in other's hands everything and more than its author claimed for it.

25. Pressure Changes in the Cerebrospinal Fluid Following Intravenous Injection of Solutions of Various Concentrations. *Am. J. Physiol.*, 1919, xlviii, 512-530.

Experimental Alteration of Brain Bulk. *Ibid.*, 531-558.

26. Foley, F. E. B. and Putnam, J. T.: The Effect of Salt Ingestion on Cerebrospinal Fluid Pressure and Brain Volume. *Am. J. Physiol.*, 1920, liii, 464-476.

24. Wegefarrth, P., Ayer, J. B. and Essick, C. R.: The Method of Obtaining Cerebrospinal Fluid by Puncture of the Cisterna Magna (cistern puncture). *Am. J. Med. Sc.*, 1919, clvii, 789-797.

THE SPINAL CORD

I have read over the general statement in my papers of ten and fifteen years ago regarding the surgery of the spinal cord, and though I might give many additional illustrations I do not know that there is very much to add to the general principles of these operations then described. There are more things, possibly, to retract than to add.

Infections. In 1910 Flexner's serum for cerebrospinal fever had just been introduced and held the stage, but I fear that we are no further advanced in our treatment of other forms of meningeal infection than we were at that time, though proposals for irrigation and drainage of the meningeal spaces recur at more or less frequent intervals.

Great hopes were aroused, particularly from a prophylactic standpoint, by Crowe's discovery of the passage of hexamethylenamine through the chorioid plexuses and its prompt appearance, after administration by mouth, in the cerebrospinal fluid. We did not know at the time, that it appeared unchanged, and that only in an acid medium like the urine was it broken up with the liberation of formalin. Crowe's observations, however, upon the efficacy of the drug, particularly as a prophylactic, in experimental canine meningitis were nevertheless so convincing, we have continued with its use in certain conditions—in patients with basal fracture, before transphenoidal pituitary operations, and so on. It certainly does no harm, though we may have been leaning on a broken reed.

In view of the fact that most of these pathogenic cocci are acid producers I have harbored the idea that in process of their multiplication enough acid may be given off by them to liberate a certain amount of formalin in their immediate vicinity, without producing an appreciable change in the reaction of the fluid as a whole—in short that in this way, even though the cerebrospinal fluid retains its faintly alkaline reaction, the growth of organisms may nevertheless be locally inhibited. We have attempted by physico-chemical tests to demonstrate the truth or otherwise of this conjecture, without any really definite conclusions.

Tumors. As stated before, there is no more satisfactory operation in surgery than the removal of an accurately localized endothelioma

of the spinal meninges—no operation unless it be for some of the major trigeminal neuralgias, in which the transformation from a suffering and bed-fast invalid to a normal life is more like a resurrection. One may imagine the elation which Horsley and Gowers must have felt in 1888 on the occasion of their epochal first case.

My experience with these enucleable tumors has not been great—only seven cases additional to the one mentioned in my 1905 address which had been reported elsewhere.²⁷ Of many things I have learned in fifteen years, one is to beware of reporting 'cures.' This man had a recurrence of his symptoms, and some years later, at a secondary operation, a growth was disclosed which to all appearances might have been the primary one. On this second occasion it was removed together with the subjacent patch of meninges, and there has since been no recurrence. The lesson was thereby learned that it does not do to merely tilt these lesions out: their meningeal attachment from which they take origin must also be removed, and this is not altogether easy since the central point of attachment seems invariably to be at the point of emergence of a segmental nerve root.

It is astonishing how promptly it begins and how great a degree of functional recovery is possible in the flattened cords long subjected to pressure by such a tumor. What is more, the promptness with which this restoration sets in may be taken as an evidence of the delicacy with which the tumor enucleation has been conducted. The last of these patients in the series gave the history of having had a cancer of the thyroid removed in 1900 and in 1903 a cancer of the breast; consequently when her spinal symptoms began to appear a few years later they were naturally attributed to a metastasis. For this reason an exploratory operation was thought inadvisable, and she gradually became bedridden from paralysis. However, the results of a neurological examination coupled with the characteristic manner of onset of the symptoms, were so unmistakably in favor of a spinal endothelioma that an exploration was advised and the expected lesion found and removed. Voluntary movements in her previously paralyzed extremities were possible the afternoon of operation, and before her dis-

27. Intradural Tumor of the Cervical Meninges with Early Restoration of Function in the Cord After Removal of the tumor. *Ann. Surg.*, June 1904, xxxix, 935-956.

charge she was walking with slight assistance and now, a few months later, goes about alone.

From these brilliant results, which are all too few, there is a long gradation of less and less favorable cases to the malignant growths at the other end of the scale. No sufferers so greatly tax one's sympathies as the victims of a malignant spinal metastases, and in 1910 I find that I had even suggested "the deliberate transection either of the entire cord or of the posterior columns alone, cephalad to the lesion." The alternative of pain or complete permanent paralysis is hard to face, for patient as well as surgeon, and was one which I had shrunk from until a few years ago, though fully aware that the victims of a transection the result of a crush usually lead an existence free from pain and surprisingly often take a curiously detached and philosophic view of their plight. This peculiar dispositional attitude of mind has seemed, in short, to be a mental attribute consequent upon the abolition of all impulses from the lower body.

Much against my wishes there was admitted to the wards in 1916 a woman suffering great pain from an obvious spinal metastasis, attributable to a breast amputation for carcinoma performed twenty-five years before. As her paralysis below the twelfth thoracic level was nearly complete, it did not seem possible that she could live for long. For months her pain had been controlled by morphia which seemed the only recourse. She, however, held out for months, courageous and cheerful though begging for some operative relief, until finally with many misgivings I divided the cord in the more accessible thoracic region well above her lesion. The results far exceeded both the patient's and my own expectations. She had no more pain whatsoever, her narcotics were completely withdrawn, she gained in strength and color, acquired an automatic bladder control and lived in really great comfort, bodily and mental, despite what she knew to be in store for her. The end came six months later—the easiest and happiest end in a case of this kind of which I have cognizance.²⁸

Akin to this, though less radical and advo-

cated for less critical conditions, are other palliative measures which have been put in practice. Förster's posterior root division in cases of tabes, which is but a development of the old operation advocated for intractable neuralgias of amputation stumps, is one example. Another procedure, which Frazier and Spiller have described, of dividing the antero-lateral columns alone is based on Henry Head's recent accurate localization of the pathway for pain.

Trauma. What was said on this score from a surgical point of view in my first paper I do not think I can now improve upon—the division into, 1, the hematomyelias; 2, the total cross-lesions usually from fracture dislocation, and, 3, the partial injuries, these being the only ones suitable for surgical intervention. The difficulty lies in distinguishing the three groups and one must acknowledge that there is no sharp dividing line between them. In this respect, however, we will have learned much, chiefly through a study of the victims of spinal gunshot wounds in the late war, though it will probably be a long time before all the material is thoroughly studied. Placed as some individuals were, Colonels Sargent and Holmes, for example, at one of the important British bases, it was possible to secure specimens for later study of lesions of practically every segment of the cord in a series of cases which had been previously subjected to a thorough neurological study. Madame Déjérine's opportunities with the spinal injuries occurring in the French army were almost as favorable and she has already published some extraordinary observations concerning ossification of the muscles in areas below the segmental level of the lesion.

Many remarkable and unknown facts were brought to light regarding the localization of function in the cord, but possibly the most immediately arresting were the studies by Henry Head and his co-workers.²⁹ Their observations have shown that, even when in its cross extent the lesion has been anatomically complete, the cord distal to the lesion is capable of resuming its reflex function to a degree hitherto unappreciated. This process, in the absence of infection, begins to set in after the third week, at which time the lower spinal reflexes begin to reappear. Hence the old conception of a permanent loss of deep reflexes with flaccid paralysis as in indica-

28. Her death occurred while I was overseas, where the following letter was received from her husband. It may deserve quoting in view of the rarity of such a procedure. "... After the operation she was brought home in May, and was enabled to enjoy the birds and flowers, and go out in a wheel chair. She finally very slowly yielded to the disease passing from us October 31, nearly a year from the time she entered the hospital. She was cheerful and patient during all her illness but beyond digestive troubles she had little pain and nothing acute. . . ."

29. Fearnside, Head & Riddock: *Brain*, 1918, xl, Parts II and III, 149-402.

tion of a total transection falls to the ground.

Though these observations are of great importance in advancing one's physiological knowledge, they do not necessarily affect in any apparent way our surgical procedures, except to influence surgeons to favor in every way possible the return of the so-called automatic bladder reflex which enables the unfortunate victim of these injuries to hold their urine for a few hours at a time.

This involves a problem relating to the care of these patients for which the war does not seem to have given a satisfactory answer, namely the correct method of dealing with the bladder in the early stage of retention. The main desideratum, if one hopes to attain for his patient a subsequent automatic bladder control, is the avoidance of infection, and whether a constant drainage by catheter from the outset, repeated catheterization, suprapubic drainage, or the avoidance of any direct interference whatsoever and letting the bladder distend till it dribbles—which of these methods is best, no one, so far as I am aware, was ever able to satisfactorily determine, nor in this generation, will we again, let us hope, have so good an opportunity of finding out.

One thing these observations of Head have served to explain are the mystifying reports which have appeared in the literature from time to time regarding the restoration of function in a completely severed spinal cord after a laminectomy and suture. Unquestionably they were erroneous observations to be explained by the reappearance of these lower spinal reflex movements which were erroneously interpreted as an evidence of transmission of impulses from above.

THE PERIPHERAL NERVES

The surgery of the peripheral nerves, other than cranial, belongs largely though not entirely, in the domain of traumatic surgery, and as injuries of the larger nerves are often coupled with deformities and need what is called physiotherapy, together with some supporting apparatus in their after care, a bid for these lesions during the war was made by the orthopedists.

It was calculated that fully 25 per cent of all major injuries of the extremities were accompanied by a more or less serious involvement of important nerve trunks and it makes little difference who cares for them—if the orthopedist he must have a better neurological training and

operative technique than most possess; if a neurosurgeon he must familiarize himself more than he is accustomed to with the mechanical correction of paralyses. The subject at all events received a great fillip during the war and much has been learned and much unlearned regarding nerve sutures. Attention may be called to a few points which stand out clearly from the great number of published observations.

It has long been known that divided nerves, given half a chance, tend to reunite. Indeed, under circumstances when a purposeful section or avulsion of a nerve has been made it is well nigh impossible at times to prevent some degree of functional reunion. This the old-time peripheral operations for facial neuralgia made only too clear. What takes place has been more or less a subject of academic dispute between the supporters of the neurone doctrine and those of Bethe's school who believed in the possibility of a peripheral regeneration of axones. Though Bethe undoubtedly found axones in the peripheral segments, Langley's explanation of their presence was doubtless the correct one. In short, the proliferation of the cells of the neurilemma sheath is the only peripheral process and though this prepares the way for the axone, unquestionably the axis cylinder must grow down from the proximal segment.

From the great mass of material of the past few years the curious observation was soon made that certain nerves show a much greater tendency to perfect functional reunion than others. To take a single example, the prognosis after injury and suture of the musculospiral was far better than after a corresponding injury of the median. This appeared moreover to have no relation to the distance between the seat of injury and the periphery, for a high radial suture was more favorable than a low median. The explanation for this which seems best to meet the facts is that the functional recoverability bears relation to the degree of purity, whether sensory or motor, of the nerve in question. Thus the musculospiral nerve has a great preponderance of motor fibres and consequently after suture there is less chance of motor axones finding their way down sensory pathways and the reverse, than if the number of sensory and motor fibres were more nearly equal as is true of the median.

This at least is the interpretation which ap-

appears best to fit the facts before us, though it is one which is difficult for me to believe as it seems a poor provision of Nature. Though we have little knowledge of what the nerve impulse really is, much less of the distinction between a motor and sensory impulse, there certainly must be some chemical difference between the two nerves which would lead us to assume a predilection of down-growing sensory axones for sensory paths and motor for motor.

Be this as it may, it is assumed that, when an imperfect functional result follows what seems to be a simple and perfect nerve-suture as so often happens after median nerve sutures, the majority of motor fibres have grown down into sensory sheaths to sensory end organs whose messages they are incapable of transmitting, and the majority of sensory fibres likewise to motor end organs.

This interpretation may be quite wrong, though, as I say, it seems to fit the facts and, if correct, it would appear to favor such detailed operative procedures as Elsberg has described, based on Déjérine's studies of the cross sectional topography of bundles in the peripheral nerves. However, even if it is surgically possible to approximate a divided peripheral nerve, bundle for bundle, in the process of a nerve suture, of which I have doubts, there is something other than end-to-end proximity—and it is only a matter of millimeters—which attracts the wandering axone into some particular peripheral tube. Indeed, one may see a perfect functional result when an actual gap has been left, or contrariwise, an imperfect result with the most painstaking approximation.

One thing has been made clear beyond question, and that is the supreme desirability of bringing the two ends of the severed nerve together without the interposition of a bridge, and ingenious ways and means of accomplishing this not only by stretching and by mobilization of the nerves but by shortening the gap in case of great loss of substance by retaining the limb in a position of acute flexion until union has taken place.

Losses of substance of several inches can be overcome in this way, and it has meant the abandonment of the pre-war ideas regarding tubularization and implantations as a means of overcoming gaps—procedures which by increase in scar formation doubtless served to defeat the very object they were intended to serve. To be sure,

there have been some remarkable recoveries, particularly in musculospiral nerves after the implantation of nerve autografts, and Nogeotte, whose experimental studies have been more extensive than any, favors the implantation, if one must be made at all, of a section of nerve from another source, which has been fixed in alcohol, but of this I have no experience.

Unquestionably, interest in all these matters aroused by the war has turned the attention of many of our younger surgeons with renewed interest to some of the neurological problems of surgery. Brief courses were given in New York, Philadelphia and St. Louis, largely under the direction of Drs. Elsberg, Frazier and Sachs—which served further to concentrate attention on the subject and to give certain medical officers whose inclination lay in this direction some general ideas of traumatic neuro-surgery.

Excellent as all this was, it is a far cry from traumatic to pathological surgery, from doing a peripheral nerve suture to a trigeminal neurectomy, from the repair of a craniocerebral injury to the removal of a brain tumor. Then, too, the lack of personal responsibility about one's army patients—a responsibility entirely assumed by the Government—coupled with the difficulty or impossibility of learning of one's end results did not inculcate in many medical officers the fastidiousness of clinical study or operative technique which is a *sine qua non* of success in civil surgery and above all of civil neuro-surgery.

I have not touched upon the *surgery of the cranial nerves* as this address is already too long. There are many interesting and important aspects of this topic, though possibly the surgery of the *trigeminus*, and of trigeminal neuralgias in particular, overshadows all else in this particular domain.

I have made these major neuralgias the subject of a recent study, and the results, given a year ago in the Hatfield Lecture before the College of Physicians of Philadelphia, are in process of publication. It may suffice to say that the modern operation of sensory root avulsion, whoever may deserve the main credit of evolving the procedure, is an operation practically free from risks and with a mortality lower than that of almost any other so-called "major" operation in surgery.

In my own series now comprising 343 cases, there have been only two fatalities, the ninth and thirtieth cases, both of them dating back to the days when efforts were made to remove the ganglion together with the root in their totality. There have been 313 consecutive cases without a fatality. There is no operation in surgery that I know of which can so completely relieve such an incapacitating malady and with such slight risk. There are possibly 5 per cent of the cases which are not cured, cases in which the

diagnosis was incorrect and in which the facial pain, supposedly trigeminal, is really of some other origin.

A National Institute of Neurology. Though as a matter of fact it was the first time that such a special line of work as is represented by neuro-surgery was recognized by an Army Medical Corps, the department was not utilized to its full for many reasons, not the least of which perhaps was the old chauvanistic idea that he who is called a general surgeon must do equally well all things surgical. Nevertheless, the desirability and need of specialization in military medicine more than in any previous war came to be accepted as a principle, and in some divisions of the service, where it obviously could prevent wastage of man power, it played an important rôle.

Those of us, however, who had the overseas responsibility for the care of such injuries of the nervous system as would incapacitate soldiers for further service, aware of the fact that these men would be the last of all our wounded to recover, and even then very imperfectly, were disturbed by the lack of coördination of neurological interests which possibly the scramble during our short period in the conflict made inevitable. Since most of the surgeons delegated to the neuro-surgical subdivision had only a meagre neurological training and the neurologists were all occupied in the important field of psychiatry, none of us got as far with our neurological problems as if we had been organized together.

Cognizant of all this, Drs. Salmon, Schwab, McCarthy and myself, after many conferences, were unanimous in the feeling that some more effective organization should be brought about and that centers should be established where psychiatrist, neurologist, neuro-surgeon and neuro-pathologist could be brought together, and where functional as well as organic cases could be seen and studied and treated conjointly for the benefit not only of the soldier but of neurology itself.

This is all past history which I have gone into more fully on another occasion,³⁰ but I touch upon it again for the reason that out of these conferences there developed the idea of a national institute of neurology. The four men whose names I have mentioned agreed to withdraw from their pre-war engagements to take full-time positions in such an institute, provided the necessary funds could be secured for its establishment on

a generous national scale. No one could possibly have been better fitted to launch and direct such an institute than Colonel Salmon, whose interests largely lie in the sociological aspects of neurology. It was hoped that under him, as subordinates, a neurologist, a psychiatrist and a neuro-surgeon might each have a hospital ward for their special cases, and that the neuro-surgical laboratory which under the direction of Major Weed in Baltimore had done such admirable work during the war might be taken over intact. It was assumed that during its first few years this institute would be entirely at the disposition of the Government and the Army for the care of the neurological cases which, as I have said, remain the last precipitate of the war injuries—cases which now, alas, are wide-scattered.

The venture proving a success, as it almost certainly would have done, it was anticipated that with the war work finished it would become a national center, an institute and hospital, for the study of disorders of the nervous system—a central rallying place where psychologist, psychiatrist, neurologist, neuro-surgeon and experimental pathologist could work in co-operation—a training ground as well for their successors who for the first time in any country would be given an opportunity, after graduation, for a broad general neurological training.

This, gentlemen, is by no means an idle dream. The situation two years ago was most favorable for the inauguration of such a movement, a movement whose ultimate objects were to bring intimately together all of those who from one aspect or another are attacking problems relating to the diseases of the mind and the nervous system. There is nothing which is possibly of more vital concern to the nation than a knowledge of the mental disorders to which its citizens are subject. There are few things relating to the health and well-being of the community more neglected. For a single imperfectly endowed clinic for the study of mental disorders probably twenty institutes for the study of cancer, of infectious diseases and so on have been established, whereas the insane forgotten in our asylums and those with nervous and mental disorders who helplessly frequent our clinics and out-patient departments out-number all other patients by far.

This project may seem far removed from neurological surgery, but I have an instinctive feel-

³⁰. Concerning the Establishment of a National Institute of Neurology. *Am. J. Insanity*, Oct. 1919, lxxvi, 113-129.

ing that some day such an institute on a scale as large as the recently founded Institute of Hygiene will come to be established. When that day arrives, the neuro-surgeon will of necessity be a participant, and from the contacts therein possible will come to have the proper neurological training essential to the success of his particular field. He will need a preliminary general surgical training, but he will nevertheless have to be a product of a School of Neurology in a broad sense such as we do not now possess, nor any other country, for the matter of that.

In the preamble to this address regarding specialization in general, my hearers may have been aware, between the lines, that I was reading my own confession into what was written. It is true, for despite a reasonably broad surgical preparation, I confess to have climbed into neurology by the outlying route described. It is for this reason that I thoroughly understand how essential it is for the neuro-surgeon of the future, if he is really to do justice to this new specialty, that he have a far better grounding in clinical neurology and psychiatry than I have had, for he must make his own diagnoses and must have an intimate knowledge of neuro-pathology if he is to know what conditions are amenable to surgical therapeutics.

Many people are eager to enter this field of work. Hardly a month passes without some well established surgeon writing to ask if his assistant may be given some instruction in "brain surgery" and can we take him. We are glad to do all that is possible. "Yes, he attended lectures in neurology as an undergraduate, and then there are colleagues who will make his neurological studies and use the ophthalmoscope for him." He comes and spends a short time as an onlooker and returns to his clinic a neuro-surgeon.

It will be a bad thing for neurological surgery when it becomes fashionable. Gynecology has already suffered from this, and orthopedics is in the way to follow. Tendencies in this direction, to my despair, are apparent. Glad as I am to feel that the importance of the subject as a special line of work is becoming recognized, and confident as I feel that the day will come when professors of neurology in our schools will have had a surgical training just as the present-day gynecologist and orthopedist must have, nevertheless the way to bring about this desired end

is not through the surgical operating room alone, but by the slow process of the neurological clinic and the laboratory. Let us hope that some day in a National Institute such as I have described, the all-round training which is essential may be properly acquired by medical graduates desiring to enter this field.

But for its own good, I pray that neurological surgery may never get so far from the home of its immediate parent, surgery, that there will be any estrangement or any possibility of its being shut out of doors when the time comes for its return.

OBSERVATIONS AND STATISTICS OF VACCINATION IN THE PREVEN- TION OF SMALLPOX.*

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During the past twenty years it has been the author's privilege to have vaccinated for the prevention of smallpox several thousand people. In the beginning of this work little attention was paid to the complaints against vaccination of the individuals to be operated on, notwithstanding the fact that some of them were very trying and plausible.

In 1904 it became apparent to the writer that there must be more than ordinary cause for so much criticism and fault finding and that there was need for investigation to ascertain the reason for the common antagonism of the laity. It did not take long to find that the necessity of vaccination was looked upon by a great many people as imaginary, while others who believed in its efficacy were not enthusiastic because they had had unpleasant experiences, such as severe sore arms or legs which left them the possessors of hideous scars after submitting to that which promised to be a simple operation. There seemed also to be no intelligent understanding as to the length of time immunity could be hoped for, neither was there any uniformity in the technique or methods of the vaccinators. Furthermore, the scars representing successful takes known as *typical*, were of such varying shapes, sizes and appearance that confusion of necessity existed in the minds of many physicians and of more pa-

*Read before the Evanston Branch of the Chicago Medical Society, October 23, 1920, and the Great Lakes Naval Training Station, November 11, 1920, before the Medical Officers and Hospital Training Corps.

tients—a state of affairs very much to be regretted, but which up to the present time has not greatly improved. These conditions and doubts naturally bring up the question, what is to be done to establish the true status of vaccination, eliminating some of the disagreeable features and all of the avoidable happenings?

On reviewing the records and history for several hundred years it will be found that smallpox was the most loathsome and dreaded of the diseases which occurred in epidemic form, and had a mortality so gigantic that figures as to the number of deaths were not often given. A remedy was diligently sought to prevent this devastating scourge. Many years elapsed before vaccination with cowpox was discovered, but when it finally was brought to light and tried with success, it is not surprising that extravagant promises were made for it which could not be fully substantiated by facts such as appear to have been brought out by repeated trials and years of experience.

Time passed bringing changes, prominent among which was the subduing of the ravages of smallpox by vaccination, to which isolation and sanitation were added, so that now in many countries instead of being the loathsome, disfiguring and fatal disease which it was in the past, it has assumed a milder form with little disfigurement to those unfortunate enough to contract it, while the mortality has been reduced in many places from more than sixty to about two per cent.

Vaccination having accomplished so much for the human being it is to be hoped that the antagonists and obstructionists may be made to see its benefits, while the medical profession patiently keeps on with investigation which in time is certain to define the period of immunity which individuals who possess typical vaccination marks may enjoy. There can be no doubt from past records, that after having had a typical result many have been protected for life against smallpox. In the future, with improved methods, greater numbers will be immune through the medium of vaccination.

Vaccination has been and often is performed in a haphazard and indifferent manner; it should, in future, be done by those having a technique, who shall insist on cleanliness and all precautions considered necessary to prevent sepsis in surgical undertakings.

It should be obligatory that each vaccinator should use the best virus obtainable, that of accredited laboratories only; should have it fresh, in hermetically sealed tubes, and keep it in refrigeration according to specified directions. There is nothing used by the medical profession more susceptible to atmospheric conditions, or more perishable than vaccine virus.

The integument is a delicate, complex structure with numerous functions, and vaccination being an inoculation by way of the skin, every precaution should be taken to protect its deeper layers (the corium) from mutilation or destruction, therefore, scarification is not satisfactory, as so much tissue is destroyed. The Kinyon and Hill method by acupuncture, which is intra-choice.

"In using the acupuncture method, drop virus on the skin properly prepared (vaccination of the thigh or leg is not recommended). Tighten the skin by grasping the arm from below with the thumb and fingers. Hold the needle (coarse sewing) slanting nearly parallel with the arm. Pass the needle through the outer layer (epidermis) of skin beneath the drop of vaccine. Repeat this a dozen times from different directions in a space of one-sixteenth of an inch in diameter. Do not go through the skin, and never draw blood." This method causes no destruction of tissue and the wounds are clean. Multiple puncture will often give more satisfactory results.

A vaccination or inoculation wound should be allowed to dry without covering of any kind, and after it is dry as much air as possible should be permitted to get to it. Patent or other shields should never be used, and dressings held in place by adhesive plaster or bandages, should not be employed. Since the skin is such a delicate organ, any constriction or pressure will disturb its functions by cutting off circulation and interfering with secretion and excretion, thereby inviting necrosis which may lead to infection.

All vesicles and pustules must be protected, the simplest method and also the one most agreeable to the patient is to line the garment worn next the skin at the affected part with soft sterile linen or gauze, which can and should be changed frequently. Objections may be made to the absence of surgical dressings, but if the above recommendations are followed there will be no occasion to find fault with the system and certainly

few will ever think of returning to old customs.

Some patients are naturally nervous and irritable, while others become so, and thinking to relieve their discomfort, will demand that the vesicle or pustule be opened. This should never be done as infection foreign to vaccination is almost certain to follow. A mixed infection, as a result of opening vesicles or pustules, will be embarrassing to the operator and may become serious to the patient.

Vaccination is influenced by the season of the year. The hot weather in summer will inactivate virus while perspiration will wash the material from the wounds, thus preventing absorption and so interfering with the results in a great many cases. Extreme cold weather also has a tendency to retard and destroy the work of vaccination as people are obliged to wear heavier clothing which causes sweating and vaporization, and these conditions, like perspiration in hot weather, do not permit the virus to be absorbed in a considerable proportion of the cases. Experience has taught that the best results have been obtained during the cool and cold months, thus making fall and spring the seasons of choice.

If these suggestions are carefully followed, typical results with their protecting scars can be looked for in almost every primary vaccination, which means that in a short period of time sepsis and mixed infections will become conditions of the past. It will then be a case of re-vaccination with negative results proving uncomplicated vaccination whenever re-vaccination is resorted to.

Statistics compiled from records of this character will determine the immunity following vaccination against smallpox. In order to obtain reliable statistics it is absolutely necessary that typical vaccination scars should be carefully studied. At the present time, it is not uncommon for individuals to present for examination and opinion, scars which had their origin in bites of animals or insects, punctured and lacerated wounds, burns, scars from chemicals and the like, which resemble the scars by sepsis complicating vaccination (mixed infection) so closely that favorable opinions of immunity are often given, although the possessor has never been and never intends to be vaccinated if it can possibly be avoided. It is unfortunate that people are so often led to believe that the greater the scar the greater the immunity, when the opposite is the

case, for it is the small scar typical of vaccination that protects.

The typical scar following vaccination is small, flat and pliable with pocks or pits of varying depth, free from heavy cicatricial tissue, these are also known as "disappearing" scars; they show little or no destruction of the corium; while their immunity has not been fully established, it has been proved beyond doubt that more of them give life protection, than can at present be imagined.

The heavy cicatricial scar of varying shape and size and the large and small luminous scar which show destruction of the whole skin structure, are those of mixed infection. It will be hard for any one to state how much vaccination or how much sepsis entered into their formation. These scars are of little value, and the individuals who possess marks of this kind generally have typical results when re-vaccinated.

The writer having been called on so often to vaccinate during epidemics or after exposure, naturally became interested in the scars that followed, and the study of these led to the findings described above after making a personal inspection of each case and recording the result. With this wealth of clinical material, the compilation of statistics suggested itself early in the work, and this resulted in the figures about to be submitted. The author requests others to interest themselves in this investigation. The industries should furnish a limitless field for such research; where males and females are employed, comparisons can be made as to the greater or lesser susceptibility of one sex over the other.

These statistics represent the work of different seasons and years, one in the hot summer months and two in the fall and early winter. The operation was performed upon male and female alike, on individuals of all races, nationalities, creeds, occupations, and social positions ranging from fourteen to eighty years of age. The vaccination was done at the place where they worked, and it is pleasing to note that where instructions were observed as to the care of the parts after operation, no infection followed.

The results, typical, fair, slight and negative, are a little arbitrary and will be explained as follows:

The *typical* result is that which manifests all the constitutional symptoms and conditions known to vaccination, accompanied by the out-

ward signs of a successful *take*, lasting the allotted time of three or four weeks, leaving a typical, small, pliable, flat, pitted scar devoid of any heavy cicatricial tissue.

The *fair* result shows a few mild constitutional symptoms, very short in duration, with a rapidly developing vesicle and pustule which runs its course in about two weeks, leaving a small indefinite scar.

The *slight* result might be left unmentioned, as no systemic disorder occurred; but there developed rapidly a sort of abortive vesicle (never a pustule) which dried up in ten days or less without leaving any trace of its having existed. In those having old scars this condition is considered a sign of immunity.

The *negative* result shows neither constitutional or local disturbance outside the annoyance of having been vaccinated, and no evidence of its presence will be apparent.

Revaccinations - November 1914.
Zion City, Illinois.
Male and Female.

Results	No.	%
Typical	74	20.44
Fair	8	2.21
Slight	32	8.64
Negative	248	68.61
Total	362	

Primary Vaccinations - November 1914.
Zion City, Illinois.
Male and Female.

Results	No.	%
Typical	95	92.1
Negative	8	7.9
Total	101	

On revaccination two weeks after the first attempt, the eight (8) negative results became typical; thus the primary vaccinations were practically 100% typical.

Vaccination of persons having had smallpox.
Zion City, Illinois, November 1914.
Male and Female.

Results	No.	%
Negative	16	100.00

No reaction of any kind appeared in these cases.

Dr. William S. White, Evanston, Ill.

CHART 1. Vaccinations and Revaccinations in Zion City, November, 1914.

The above results were obtained during the epidemic of smallpox in Zion City; in 1914 the work was done in the Zion City industries at the instance of Marshall Field & Co.

The author cannot refrain from commenting on the articles which appeared in the official paper of the above city, "The Plutocrat," while the vaccinations were going on. The names and terms applied to the author were not at all complimentary or elevating to the editor or newspaper. The consequences of having been vaccinated were illustrated by obsolete pictures so revolting that it would be hard to imagine that any thinking person would take time to look at them. When all was over and many of the ad-

herents to the belief peculiar to Zion City appeared after recovering from smallpox with the unsightly scars that follow it, one would have supposed the party responsible for the publication of these articles and pictures would acknowledge the error and return thanks to those who through the medium of vaccination were able to immunize people without causing death and destruction as was predicted.

These statistics were compiled from the records of vaccination done in the various departments of Marshall Field & Co. in Chicago after an exposure of some of the employes to smallpox in summer of 1915. (See Chart 2 and Figure 1.)

The following statistics were made from the records of vaccinations done in the several departments of Marshall Field & Co. in Chicago after an exposure to smallpox of employes in late fall of 1917. By promptly vaccinating those exposed no case of smallpox developed. (See Chart 3 and Figure 2.)

In summing up the work on vaccination just described it is the author's belief that a regular system similar to that outlined below will be of advantage to all future work in vaccination:

1. The cool and cold months should be selected when possible.
 2. Use nothing but fresh virus of accredited laboratories.
 3. Vaccination should be done with all the precautions as to cleanliness that is customary in the case of surgical procedures.
 4. Do not unnecessarily mutilate or destroy the integument.
 5. Three points of inoculation give the best results.
 6. Never dress vaccination wounds, but permit them to get plenty of air.
 7. Record all primary vaccinations with the date, age and results.
 8. Record all revaccinations in the same careful manner as the primary.
 9. Study scars of typical vaccination, observing closely the immunity they give the individual.
 10. Records full and complete from which statistics may be compiled will ultimately define the protection accorded one typically vaccinated.
- The writer would be ungrateful indeed should he omit to give credit to the man who, by his counsel and encouragement, caused him to perse-

verc in this investigation to the completion of the present statistics, Dr. Heman Spalding, Chief of Bureau of Medical Inspection, Chicago Department of Health.

The observations which led to the recommendations and statistics above enumerated were made while vaccinating the employes of Marshall Field and Company, and to them much praise is due for their hearty co-operation whereby the author was permitted to go and come at will in the various departments, sections and buildings where the vaccinations had been done. The members of the firm were personally interested in the checking of the results and furnished assistance whenever and

Revaccinations - June and July 1915.
Male and Female.

Results	Age 14-20	Age 21-30	Age 31-40	Age 41-50	Age 51-60	Age 61-70	Age 71-80	Unknown	Total
	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
Typical	48 6.51	92 6.68	96 10.49	69 13.66	82 15.16	7 16.28	3 56.		346 9.14
Fair	10 1.35	11 .88	13 1.44	5 .99	4 1.94	1 2.22			44 1.16
Slight	9 1.22	27 1.96	17 1.86	9 1.79	8 3.88				71 1.87
Negative	670 90.92	1246 90.66	781 86.21	422 85.56	167 79.62	24 79.08	3 50.	143	3322 87.88
Unknown									
Total	737	1376	906	506	211	43	6	143	3927

Revaccinations - June and July 1915.
Males.

Results	Age 14-20	Age 21-30	Age 31-40	Age 41-50	Age 51-60	Age 61-70	Age 71-80	Unknown	Total
	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
Typical	40 9.3	52 6.6	62 9.4	47 13.1	19 11.5	5 12.5	2 40.		217 9.42
Fair	7 1.6	8 1.	5 .9	5 1.5	2 1.2				27 1.16
Slight	4 .9	18 1.6	10 1.5	7 1.9	6 3.6	1 2.5			40 1.75
Negative	380 88.2	701 90.8	483 87.8	299 83.5	159 83.6	24 78.5	3 60.	136	2099 87.7
Unknown									
Total	431	775	550	358	166	40	5	136	2459

Revaccinations - June and July 1915.
Females.

Results	Age 14-20	Age 21-30	Age 31-40	Age 41-50	Age 51-60	Age 61-70	Age 71-80	Unknown	Total
	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
Typical	8 2.61	40 6.6	43 12.1	22 14.1	13 28.8	2 66.66	1 100.		129 8.83
Fair	3 .98	8 .8	8 2.2	2 .8	2 4.5	1 33.33			17 1.16
Slight	5 1.53	16 2.6	7 1.9	2 1.3	2 4.5				21 1.42
Negative	290 94.88	546 90.6	298 86.8	128 86.6	28 68.2				1284 87.99
Unknown									
Total	306	605	256	147	45	3	1	7	1468

Primary Vaccinations - June and July 1915.
Male and Female.

Results	Age 14-20	Age 21-30	Age 31-40	Age 41-50	Age 51-60	Age 61-70	Age 71-80	Unknown	Total
	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
Typical	21 75.	69 67.84	13 40.62	7 60.	4 50.				104 56.5
Negative	7 25.	48 42.16	19 59.38	7 50.	4 50.				80 43.5
Total	28	102	32	14	8				184

Primary Vaccinations - June and July 1915.
Males.

Results	Age 14-20	Age 21-30	Age 31-40	Age 41-50	Age 51-60	Age 61-70	Age 71-80	Unknown	Total
	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
Typical	11 100.	23 68.5	7 33.33	3 60.	3 50.				37 87.6
Negative		19 35.5	14 66.66	6 66.66	3 50.				42 42.4
Total	11	32	21	9	6				99

Primary Vaccinations - June and July 1915.
Females.

Results	Age 14-20	Age 21-30	Age 31-40	Age 41-50	Age 51-60	Age 61-70	Age 71-80	Unknown	Total
	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
Typical	7 58.8	26 85.	5 54.5	4 80.	1 50.				47 56.5
Negative	7 41.2	24 48.	5 45.5	1 20.	1 50.				28 44.5
Total	17	50	11	5	2				85

Revaccination and Vaccination of Persons who had Smallpox.

Results	Age 14-20	Age 21-30	Age 31-40	Age 41-50	Age 51-60	Age 61-70	Age 71-80	Unknown	Total
	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
Male - Neg.	1 100.	4 100.	3 100.	2 100.	2 100.				12 100.
Female - Neg.	2 100.	8 100.	2 100.	2 100.	2 100.				18 100.
Total	3	12	5	4	4				30

Dr. William S. White, Examiner, Ill.

CHART 2. Vaccinations and Revaccinations, by Age and Sex, June and July, 1915.

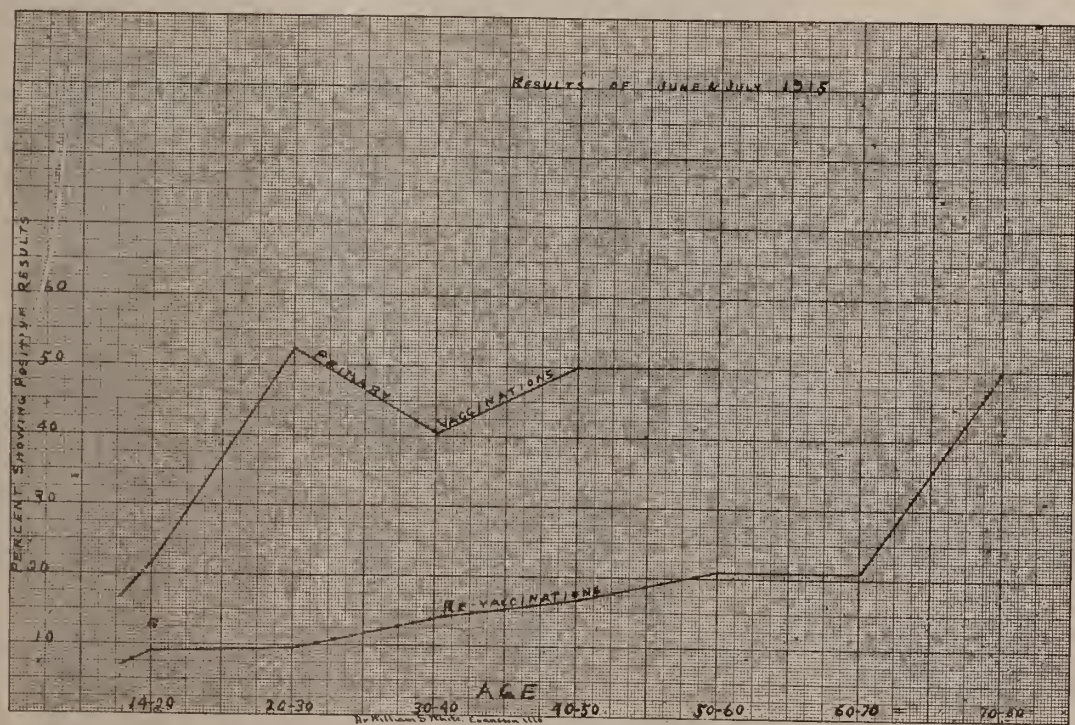


Fig. 1. Vaccination and Revaccination, June and July, 1915.

wherever such assistance could be used to advantage.

So firmly does the author believe in the efficacy of vaccination and the immunity it provides to those successfully inoculated, that were he permitted it would be a pleasure to re-issue the challenge of the deceased Master Physician, Sir William Osler:

Here I would like to say a word or two upon one of the most terrible of all acute infections, the one of which we first learned the control through the work of Jenner. A great deal of literature has been distributed casting discredit upon the value of vaccination in the prevention of smallpox. I do not see how anyone who has gone through epidemics as I have, and who is familiar with the history of the subject, and who

Revaccinations - Winter 1917 & 1918. Male and Female.												
Results	Age 14-20 No. %	Age 21-30 No. %	Age 31-40 No. %	Age 41-50 No. %	Age 51-60 No. %	Age 61-70 No. %	Age 71-80 No. %	Unknown No. %	Total No. %			
Typical	65 10.58	184 18.58	98 17.18	78 21.84	82 21.92	6 10.91	1 15.6		598 14.48			
Fair	8 1.27	80 1.99	19 2.43	10 2.82	5 3.42				63 2.25			
Slight	11 1.75	14 1.39	12 8.19	5 1.47	9 6.16	1 1.68			82 1.89			
Negative	848 86.6	846 84.27	429 77.27	265 73.5	100 68.5	48 87.27	7 87.5		2256 61.58			
Unknown	24	117	85	58	27	8			464			
Total	726	1181	650	608	172	62	1	70	3801			

Revaccinations - Winter 1917 & 1918. Males.												
Results	Age 14-20 No. %	Age 21-30 No. %	Age 31-40 No. %	Age 41-50 No. %	Age 51-60 No. %	Age 61-70 No. %	Age 71-80 No. %	Unknown No. %	Total No. %			
Typical	42 12.4	91 14.61	89 19.41	66 20.76	28 20.9	6 11.1	1 12.5		325 16.78			
Fair	8 .98	12 1.6	14 3.06	9 2.86	5 3.98				45 2.22			
Slight	7 2.07	7 1.14	6 1.32	4 1.28	2 1.9	1 1.4			29 1.80			
Negative	886 84.61	803 88.1	350 76.22	239 73.15	97 72.95	47 87.05	7 87.5		1689 79.49			
Unknown	60	88	94	49	27	8		56	2307			
Total	493	701	663	267	161	62	9	56	2307			

Revaccinations - Winter 1917 & 1918. Females.												
Results	Age 14-20 No. %	Age 21-30 No. %	Age 31-40 No. %	Age 41-50 No. %	Age 51-60 No. %	Age 61-70 No. %	Age 71-80 No. %	Unknown No. %	Total No. %			
Typical	28 7.99	33 8.46	6 4.25	9 25.69	4 36.38				70 9.56			
Fair	8 1.75	2 2.04	8 8.1	1 2.84					19 2.22			
Slight	4 1.36	7 1.79	6 4.25	1 2.84	5 41.67	1 100.			23 2.79			
Negative	256 88.9	245 87.72	79 82.60	24 68.84	3 25.			14	706 88.46			
Unknown	24	22	1	8				14	71			
Total	328	420	97	32	18	1		14	894			

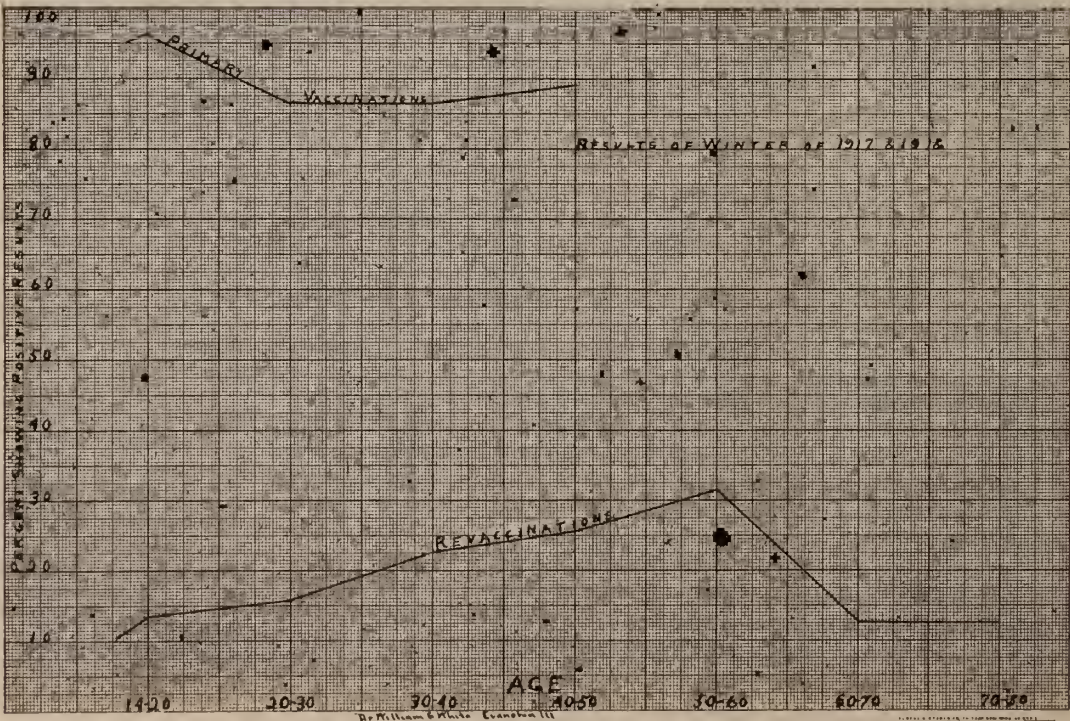
Primary Vaccinations - Winter 1917 & 1918. Male and Female.												
Results	Age 14-20 No. %	Age 21-30 No. %	Age 31-40 No. %	Age 41-50 No. %	Age 51-60 No. %	Age 61-70 No. %	Age 71-80 No. %	Unknown No. %	Total No. %			
Typical	50 96.15	50 80.64	25 80.64	8 86.5					133 36.86			
Negative	2 2.86	12 19.36	6 19.36	1 11.2					21 12.85			
Unknown								24	24			
Total	52	62	31	9				24	178			

Primary Vaccinations - Winter 1917 & 1918. Males.												
Results	Age 14-20 No. %	Age 21-30 No. %	Age 31-40 No. %	Age 41-50 No. %	Age 51-60 No. %	Age 61-70 No. %	Age 71-80 No. %	Unknown No. %	Total No. %			
Typical	20 90.9	25 79.51	11 64.71	8 88.2					68 80.5			
Negative	2 9.1	6 20.7	6 36.3	1 11.2					15 19.5			
Unknown								20	20			
Total	22	29	17	9				20	97			

Primary Vaccinations - Winter 1917 & 1918. Females.												
Results	Age 14-20 No. %	Age 21-30 No. %	Age 31-40 No. %	Age 41-50 No. %	Age 51-60 No. %	Age 61-70 No. %	Age 71-80 No. %	Unknown No. %	Total No. %			
Typical	30 100.	27 81.81	14 100.						71 92.			
Negative		6 18.19							6 2.			
Unknown			14					4	4			
Total	30	33	14					4	81			

Revaccination and Vaccination of Persons Who Had Smallpox.												
Results	Age 14-20 No. %	Age 21-30 No. %	Age 31-40 No. %	Age 41-50 No. %	Age 51-60 No. %	Age 61-70 No. %	Age 71-80 No. %	Unknown No. %	Total No. %			
Male - Neg.	1 100.	7 100.	8 100.	5 100.					21 100.			
Female - Neg.	1 100.	1 100.							2 100.			
Unknown								10	10			
Total		8	8	5				10	29			

CHART 3. Vaccination and Revaccinations, by Age and Sex, Winter, 1917-1918.



has any capacity left for clear judgment, can doubt its value. Some months ago I was twitted by the editor of the *Journal of the Anti-Vaccination League*, for "a curious silence" on this subject. I would like to issue a Mount Carmel-like challenge to any ten unvaccinated priests of Baal. I will go to the next severe epidemic with ten selected vaccinated persons and ten selected unvaccinated persons. I should prefer to choose the latter—three members of parliament, three anti-vaccination doctors, if they could be found, and four anti-vaccination propagandists. And I will make this promise—neither to jeer nor to jibe when they catch the disease, but to look after them as brothers, and for the four or five who are certain to die I will try to arrange the funerals with all the pomp and ceremony of an anti-vaccination demonstration.

WM. OSLER.

THE PHYSICS AND USE OF RADIUM.*

H. P. BEIRNE, A. M., M. D.

Radiologist, St. Mary's Hospital, Director Radium Institute,
QUINCY, ILL.

Mr. President and Members of the Madison County (Ill.) Medical Society:

It is always a pleasure for me to visit the medical societies in my councilor district, and bump elbows with my medical colleagues. I remember hearing a man of national medical prominence say, "If you go to a medical meeting, and take home with you one good idea or fact connected with your professional work, that you did not know before, the meeting has been a profitable one." Now I want you to take home with you a few facts about the physics and use of radium.

First, radium belongs to what is called the radio-active group. Now get this definition clear, it is necessary in order to grasp how radium acts, and what it does. A radioactive substance is one that passes through an opaque body—not as a bullet goes through a board leaving a hole, but it goes through leaving the opaque body intact. I hold in my hand an ordinary soft pine board, one inch thick. Now we use this board and a sheet of lead a millimeter thick, as a screen in the treatment of goiter, and the gamma ray goes through both into the thyroid, yet the board is the same after use as before. This fact is part of the mystery of radium, and opens up a new field in physics. Radium belongs to the uranium family—in fact, to use a homely, but not a scientific phrase, radium is the great, great grandchild of uranium. The radioactive field has opened up a new departure in science, not bound by physics and chemistry, as we all have been taught. It proves new functions, new use, new power to

molecules and atoms—in fact, they show us that some of them possess qualities we never dreamed of! A radioactive substance evolves a new and continuous supply of energy from day to day, and is throwing this energy off, and apparently without any loss on its own part. I hold in my hand a small needle—a 50 milligram needle valued at \$6,000. Now the energy that is in this needle, if it were converted into coal to manufacture electricity, would light a good sized town for several weeks. Think of it! And to all outward appearance it is inert.

The first discovery of the property of radioactivity was made in Paris by Becquerel. Becquerel wrapped a photographic plate in black paper and placed on it a phosphorescent substance and happened to use a preparation of uranium, and found, as a result, that the photo plate was darkened. The uranium had given off rays, which unlike sunlight, had penetrated black paper. It was soon found that these rays penetrated thin plates of metal. A coin was laid on the photo plate and both put in a drawer, having been placed between the plate and the uranium preparation. He was surprised to find a picture, or a negative of the coin on the plate, although no sunlight was used. Later it was discovered that this quality was found in compounds of uranium, as well as in uranium. This led the investigators to feel that there was some unknown or undiscovered substance or element contained therein. This substance was called by Madame Curie Polonium in honor of her native country, Poland. Prof. Curie, husband of Madame Curie, was professor at the Sorbonne in Paris, and to them and to Becquerel is due the honor of the discovery of this substance, which was afterwards called radium. The therapeutic value was indirectly discovered by an accident. A scientist traveled between Paris and London, carrying some radium in his pocket. He noticed it had burned the skin on his thigh, although at the time of making the trip he felt nothing. This set the surgeons to thinking, why would it not be well to try it in cancer. They did so, and its magic influence and curative power were spread throughout the world. Does radium cure cancer? Clinically we have positive proof that *it does*, and is doing it *every day*.

There are four rays to radium, the alpha, the beta, the gamma, and the delta ray. We can screen or shut off the first two, but there is no

*Presented before the Madison County (Ill.) Medical Society, Jan. 7, 1921.

known substance that can shut off completely the gamma ray of radium. Space alone can do it. The delta ray we know little or nothing about. The alpha ray is a particle of matter one-fourth the size of an hydrogen atom, and thrown off at the rate of 12,000 miles a second. They are thrown off like a bullet out of a gun. They are positive atoms of helium. Their power of penetration is slight. A thin sheet of paper will cut them off. All are of the same length. The alpha rays are straight.

The beta ray is an ether disturbance divided into soft, medium and hard rays. They travel at the rate of 185,000 miles per second. Think of it—matter moving at the rate of 185,000 miles a second! Why the velocity of a cannon ball at the muzzle is a fraction of a mile a second. It is hard to grasp what a bombardment of beta rays really is. The beta rays often zig-zag.

The gamma, or hard rays, have been described as pulsations of ether of short wave lengths. Very little is known about them. No known substance can stop the gamma ray, except space. They have the same velocity as light—yet they are not heat, or light. The magnet does not influence them. The gamma ray has 1,000 times the penetrating power that the alpha ray has. Radium is extracted from carnotite, pitchblende and antinite—all uranium ores. To produce one gram of radium element 500 to 700 tons of ore are treated and about 700 tons of chemicals exclusive of water are used in extracting one gram of radium. It is washed, heated and cooled about 1,500 times in its preparation. Its uses are familiar to us all. In cancer, tumors and uterine fibroids, it often acts like magic if the tumor is not larger than a five months pregnancy; epithelioma; Hodgkin's disease; goiter, keloid, angiomas, leukoplakia, port wine stains, nevus, rodent ulcers, moles and warts, that tend to break down, and many chronic skin troubles. There is a stage in many conditions we call the pre-cancerous stage—that stage in which we can offer a good prognosis when metastasis is an improbable sequel, before there is glandular involvement; when the door of hope is wide open for the patient, if he and his physician will only recognize his danger—the border line, as it were.

I was greatly impressed recently when I visited a skin and cancer hospital at a slogan posted in their reception room, which read: "Cancer leads to but one place—the grave, if not taken in time."

We should reflect on these words, and ask ourselves—have we done our full duty in not warning these people who are in the pre-cancerous stage of their great danger? If your patient is past 40 and shows a tendency to a lesion like keratosis—warts, moles or ulcers that break down and do not heal—by all means warn him of his danger. Scaly skin which grows thick and tends to bleed in middle life is very apt to become malignant.

The basis of action of radium is what is called a selective action—destroying diseased or cancer cells, and only in a small way destroying normal cells. One author says: "It takes five times as much radiation to destroy normal cells as it does to destroy a cancer cell." So radium is not a caustic. Mayo says: "Radium sickens the cancer cell"—thus its resistance is reduced. I must quote Howard Kelly of Baltimore in his *Fibroids Treated by Radium*: "In 128 cases of uterine fibroid—in 123 of them, radium made the tumor disappear, or diminished it markedly or robbed it of all clinical significance." No surgery, no psychic trauma, due to unsexing, no after- invalidism, and no long chain of nervous symptoms, exasperating to the patient, the relatives and the physician! Radium should first be tried in cases where the fibroid is not far above the pubes. Let me remind you that cancer may be cured if taken in time. Read it again, doctor, and think it over.

I wish to refer briefly to a few cases, in which we used radium.

Case 1. Mrs. H., a married woman, 62 years of age, mother of 5 children, was referred to me by Dr. B— for an erosion of the cervix that had been present only a short time. Right here it might be well to volunteer the information that many of the leaders today in surgery would not think of operation on a carcinoma of cervix, as small as a pea; the prognosis is too grave. We made a diagnosis of beginning carcinoma of cervix. Before applying the radium we cut out under local anesthesia a small section right from center of diseased area, the pathologist's report was carcinoma. 50 milligrams of radium was applied to cervix for 16 hours, the vagina packed with gauze and patient put to bed. No other treatment was used. In three weeks, on examining her with a speculum and light, the erosion had entirely healed. There was no glandular involvement. This patient was examined again in eight months after the first and only treatment of radium and clinically she is well and no return of the lesion.

Case 2. Mr. P. of Montrose, Ia., referred to me by Dr. H— for an epithelioma of ear that had been there for two years. Had been treated with x-ray

for several months, without result. Thirty-five milligrams of radium after screening was applied for 5 hours. He returned in thirty days with lesion all healed except a small area size of a small pea, patient returned again in thirty days with lesion healed entirely; in fact, could not tell where epithelioma had been.

Case 3. Cecil C., boy aged 13, had been to one of the larger clinics for a glandular involvement of neck. Diagnosed Hodgkin's disease. Radiated 15 hours with 50 milligrams heavily screened. In sixty days boy returned, a second application was made, the result was brilliant. Boy today after nine months is in apparent good health.

Musselman Building.

TWILIGHT SLEEP.*

ELIZABETH R. MINER, M. D.

MACOMB, ILL.

It is not with an idea that I can bring to you a great deal that is new on this subject that I come before you today. It is really to tell you how this method has worked out with me, and after using it in the homes for five years, how much practical worth it has.

Five years ago last January the lay magazines were so full of articles on twilight-sleep that I became very much interested in it and determined to learn everything possible about it. Chicago was the nearest place where it was used, and so I went there to a prominent physician at one of the leading hospitals, and she told me her experience and allowed me to watch as many cases as I could take time to see.

This was a fine opportunity for studying the results of the drug, but many things are different in practicing in a country home than in a hospital fitted to care for these cases. But after watching these women and hearing their expressions of gratitude for the great relief from the shock and suffering of the birth, and watching their condition, and the condition of the babies for some time after confinement, I became so enthused I decided that the women of my locality should have this great boon too.

In my opinion, there is no reason why a woman in her own home should not have this relief as well as in a hospital, if the doctor will give her the time necessary for proper care. I do not mean by this that more time is required for the birth with twilight-sleep than without,

for the dilatation of the uterus is so much hastened by the use of the scopolamin that it fully makes up for the slower expulsive pains, and so neither lengthens nor shortens the birth. But when the patient is cared for in her own home, as many of my cases have been, the physician must stay more time with her.

In the hospital a nurse sits by a patient coming out from an anesthetic until she is conscious, fearing that some of her unconscious movements may injure her; and a patient with twilight-sleep needs the same care. When you do not have a nurse, or a hospital prepared for these cases, the physician must stay with the patient.

When we first heard of this treatment we were told that we must have a sound proof, darkened room. It is not necessary. The patient goes to sleep better if there is no bright light in the room and if there is no talking going on just around her, but this is all that is needed. Sometimes after the second dose of the medicine, and almost always after the third dose, the patient does not notice any ordinary noise or talking in the room. But she should not be allowed to be disturbed by someone trying to arouse her "to see if she knows what is going on," etc., and this is one of the difficulties in a home. A bright light annoys the patient at any time during the labor and helps to keep her conscious.

When do I start the twilight-sleep? After carefully scrubbing my hands and putting on sterile rubber gloves I make a pelvic examination and if labor has really begun, the first dose of the medicine is given. I find that I have a quieter patient if this is given very early in the labor, that is, if the uterus has only just begun to dilate. If it is begun early it does not take more of the drug to complete the labor than if you begin its administration later, for it can be repeated at longer intervals. If it is begun when dilatation is half done or almost complete, it must be given at shorter intervals as the pains are so severe they arouse the patient and she becomes so nervous thinking she will not get her relief that she is very apt to be delirious.

The delirium present depends not only on the stage of dilatation, and the amount of the drug given, but also on the type of patient. Some patients of a phlegmatic type hardly make a movement while the child is being born, if the drug is given early in the labor. I remember one very

*Read before the section on Medicine, Public Health, and Hygiene, Illinois State Medical Society, Rockford, Illinois, May 20, 1920.

large woman (5 feet 8 inches tall and weighing 200 lbs.) attended in her country home who made no outcry, lying passively on her back without turning or moving during her expulsive pains at the birth of an eleven-pound child. Three years later, with a ten-pound baby, she was rather restless, as the drug could not be begun until dilatation was half completed.

Do I have blue babies with twilight-sleep? Yes, both with it and without it. But no more with it than without it.

The babies are usually quieter and sleep more for the first twenty-four hours than a baby born without twilight-sleep. This you would expect, and it is an advantage instead of a disadvantage, because the mother gets her rest if the baby sleeps.

When twilight-sleep was first given, women were told by some opponents that they would lose their minds if they would take it. It is needless to say that now this is not even thought of. It never had any foundation in fact. A drug so temporary in its action that it must be repeated every two hours at the farthest (when the patient is in any pain) to keep her unconscious of this pain, is certainly not harmful to the mind. The symptom which lasts the longest with the patient is the dilatation of the pupils. I have seen this last 30 hours, but it is never permanent.

Are my patients delirious? Almost all of them keep up a little, almost incoherent talk which commences after the second or third dose of the scopalamin and is continued until after the birth is completed. This talking varies from a few words said at each pain, to a constant chatter kept up until the child's head passes through the rim of the cervix. After this the pains do not arouse the patient so much and she usually stops most of her talking.

The medicine is given hypodermically. The first dose consists of one-eighth grain morphin and one one-hundredth scopalamin. This is all the morphin that is given, but the scopalamin is repeated as needed. If this is begun early in the labor, it is repeated in an hour and then would need to be repeated every 1½ or 2 hours, depending on the way the patient needs it to keep her from becoming conscious. If given late in the labor, the second dose may be given in ½ hour

after the first, and the third dose in an hour more; giving the number of doses required to keep the patient in the state of amnesia and analgesia desired for the labor.

The first effect of the scopalamin is to make the patient very thirsty and as she is not unconscious yet, she asks for and is given all the water she will drink. The cheeks are often flushed and even quite red during the labor, making the patient look very feverish. She usually urinates freely several times during the early part of the labor. At first she lies in a quiet sleep, but as labor goes on the pain makes her restless and she turns over or moves around with each pain. At the time the uterus is fully dilated I find these patients often take the characteristic position of getting on their hands and knees. When the membranes rupture the patient usually quiets down and bears down with her expulsive pains. This is the time, just as the child is being born, that the physician must be on his guard about the mother unconsciously rolling over and hurting the child. After the birth the patient is always quiet. The expulsion of the placenta does not seem to arouse her to any extent and she usually sleeps through the cleaning up and changing time and perhaps a couple of hours more. This length of sleep depends on how much of the drug she has had, but almost all of the patients take at least two hours quiet sleep, and some sleep as long as six hours. While not fully conscious they can be aroused and are conscious for a few minutes each time when spoken to. This sleep is a great comfort, as it takes them quietly through the first hours of the time when the after-pains are so severe. Many women insist on having their babies sleep in the bed with them. But I always leave the order that the baby is not to be left in the bed alone with the mother until after the first night is over. By that time there is no doubt of her consciousness, and no danger of her sleeping so soundly that she might roll over and smother the baby. Of course a separate bed is always best for both.

It has been said that mothers are not so apt to have milk for their babies after taking twilight sleep. But I cannot see any difference. I have had some women who have not had milk for their babies born before they knew of twilight sleep, and who have had plenty with the twilight babies. I had one woman who had twin boys with her

twilight sleep and she nursed them both and had plenty of milk for both.

There are a smaller number of lacerations of the cervix and perineum with the use of the morphin and scopolamin than without. This is due to the slower expulsive pains caused by the medicine.

Do I have more forceps delivery cases with the twilight babies? No. With my last series of one hundred cases I had four forceps deliveries. These were all primiparae, three of them past the age of thirty. But if it seems that a labor will be unduly prolonged, I do not hesitate to use pituitrin, with or without twilight sleep. If the uterus is fully dilated no harm can be done, and it usually supplies the needed stimulus.

In this same series of one hundred cases I had one still-born child, but the mother told me before it was born that she had not felt motion for 24 hours and she feared the child was not living. The babies are usually born crying, but if not, they are breathing well and soon cry; and who has not had (without using twilight sleep) some babies who did not cry at once?

But the obstetrician who uses twilight sleep must make up his mind to have this method blamed for everything abnormal which could occur. A baby's deformity, or an indigestion or colic coming on weeks after birth, or a mother's subinvolution from lifting and working too hard too soon after the baby is born, will all be blamed on twilight sleep.

A physician who uses this treatment must expect to get the blame which comes to anyone who does something new, but he will also get the heart-felt gratitude of the women he has confined. They lose the feeling of exhaustion which comes to most women the day after a birth; they have no knowledge of the long hours of pain and suffering. They simply go away into unconsciousness and wake up to find their baby in the little bed across the room. It does not matter to them that they babbled foolishly while they were asleep. What person would refuse to have an anesthetic in an operation for appendicitis because he might struggle while going to sleep or might even say something he would rather not say?

But it is a hard method for the physician using this treatment in the homes. It takes more of his time and care and attention. It is only just

then that he should ask the compensation that this should entitle him to.

The women who have had twilight sleep once want it also with the next baby. In the five years in which I have been giving twilight sleep, a number of women have had me give it to them the second time; and to one I have given it the fourth time, and she has four perfect, fat little boys, children anyone might be proud to have. If you would see the pictures I have of sturdy little youngsters, bright and healthy and well, all twilight babies, you would say that nothing has harmed them.

At the last, it will not be the physicians who will have the say about whether we will have twilight sleep. It will be the women who have the babies. I think the day will come when it will be just as unusual for a woman to go through childbirth without twilight-sleep as it is for one to have a surgical operation without an anesthetic.

DISCUSSION

Dr. Bertha M. Van Hoosen: I think this paper of Dr. Miner's is the most important contribution to the really quite voluminous literature that we already have on twilight sleep that we have had for many years. Her experience and her report are practically identical with the report that I could give you of a series of 2,500 cases that we have just completed at the Mary Thompson Hospital.

In regard to the still births in relation to resuscitation, there would be practically no difference from what I could give you than what the doctor has given you.

One little thing she didn't mention is that in these 2,500 cases no woman has ever gone into convulsions while she was under the anesthetic, and these cases were not selected cases. We have given it to all cases just as all surgeons give an anesthetic for all operations. We feel that anesthetics are of special value to the woman who has a heart or lung complication, and from what I have said in regard to the convulsions you know we consider it of special value where the kidney was troubling the patient.

But, after all, when we have gotten these 2,500 cases and reported to you the great advantage, we still are lacking the chief reason, the chief interest in twilight sleep. Can it be practical? Can it be used in the home? Of all the babies that are born in the world, a very small per cent of them are born in hospitals. Although it is very fine even for the small per cent that go to the hospital and have a painless birth and have the results that Dr. Miner has described, still it is not what we want. What we want is some anesthetic that can be used in the home by the general practitioner and used with success.

If you knew Dr. Miner as I know her, if you knew

that she was a very fine obstetrician and very fine practitioner before she took up twilight sleep, I think that you would prize her paper even more than you do now. It is certainly one of the most valuable contributions and I personally am very grateful for this report of Dr. Miner's.

Dr. G. G. Burdick (Chairman): I would like to state before closing, that there is a new ether that has been brought out by the Du Pont people. It is a very purified diethyl ether which is saturated with some gas which has not been announced at yet.

This ether produces a complete analgesia without the loss of consciousness. It is on the market at the present time. I haven't been lucky enough to get any of it but it has been published through the dental profession in the East.

SUBSEQUENT TREATMENT IN CASUALTY CASES.*

DON DEAL, M. D.

SPRINGFIELD, ILL.

When we entered upon the World War, the attention of the medical profession, and particularly of those interested in surgery, centered upon the tremendous developments in casualty work which would doubtless come about in our experiences overseas. Perhaps on account of its more spectacular aspect, the earlier consideration of war surgery was confined largely to first aid and, as a result, medical literature rapidly became almost overloaded with articles on this phase of the subject. The first monographs and the first volume on war-time casualty practice, as had been the case with the literature of emergency surgery of several years previous, devoted little attention to the very essential follow-up of cases. Possibly in our pre-war literature this omission may be accounted for by the prejudice which has prevailed in the medical profession against massage, electricity and hydrotherapy—valuable agencies which have fallen into some disrepute through their employment by drugless healers and other quasi-medical practitioners.

As we have emerged from the war, however, we find that the after-treatment of emergency or casualty cases has developed a new dignity and a new importance and, at the same time, if one were asked to designate the most significant developments from war-time surgical experience, he would probably point out the physical reconstruction of the maimed and the wounded, in

which the after-treatment occupies a most conspicuous part.

On account of the very meagre literature on the subject, I shall not attempt to draw conclusions from the experiences of others, but will confine myself to the informal discussion of my own observations based on a rather extensive list of cases seen during the past few months. I will say in this connection, however, that practically all surgeons with whom I have talked and such men as Clarke, Hutchins, Kessler and McFee who are giving thought to the possibilities of reconstructive therapy, speak with the utmost enthusiasm about it and further, that there is ample evidence that the apathy which has existed in regard to the unquestioned efficacy physiotherapy in the past is rapidly disappearing.

First, I want to disclaim at once that I am a physiotherapist. I know little of the technique employed by masseurs, electrotherapists or hydrotherapists. My conclusions are based upon the end-results attained by a physical therapeutic expert constantly employed in my office with patients which have passed through my hands and with whose conditions I have been perfectly familiar. These results have been such as to lead me to feel that in relegating physical means of treatment to quacks, charlatans and drugless healers we have overlooked factors which would contribute largely to our success in emergency surgery and factors which, if intelligently employed, will lessen the suffering, reduce the temporary disability and limit the degree of permanent injury of the patient. My only thought in introducing the subject at the present time is that I may influence you in some measure to abandon prejudices and to investigate with an open mind what physical therapy has to offer you in the daily pursuit of your professional work.

If studied without prejudice, I am satisfied that the physical therapist will soon hold a place in the staff of the busy surgeon similar to that now occupied by the expert in the use of the x-ray or of radium.

I have come to feel that the omission of this line of supplemental treatment in many emergency cases can only be looked upon as a definite neglect, since its employment not only shortens the period of temporary disability, restoring

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function more promptly, but also favorably modifies the permanent partial disability.

Many of our patients, victims of industrial accidents or injuries, are brought before Industrial Boards shortly after the removal of splints and bandages and just before or immediately following their return to work when, under ordinary circumstances, the surgical treatment is regarded as completed, but when a large degree of disability remains. It is the common experience that these patients improve materially during the number of weeks after they have resumed work and after ordinary surgical treatment has been discontinued. Their appearance before industrial boards, greatly disabled, at the conclusion of surgical treatment, gives rise to faulty opinions in determining the actual condition of the individual.

In such cases as these massage, hydrotherapy and electrotherapy could be regarded as an essential part of the surgical treatment. These men would appear before industrial boards with a much higher degree of restoration of function and incidentally, would be returned to their employment very much earlier. In fact, after the surgical treatment is supplemented by the intelligent use of physical therapy the surgeon does not dismiss his patient until the end-result has been actually attained and speculation as to the future is no longer necessary.

Supplemental treatment is especially desirable in functional and traumatic neurosis, in malingering, in vague pain symptoms, in fractures, and in extensive scar formation, especially when limiting motion.

In the treatment of fractures, the duties of the surgeon do not end when apposition is secured and splints applied. We cannot dismiss fractures as cured, at this stage. It is unfortunate that the same control is not in effect as was in the Army. A campaign of education must be carried out in order that the value of such measures may be generally known. Considerable headway can be gained in the removal of both temporary and permanent disability by early active and positive motion and in addition, with massage in the after-treatment. Massage applied without disturbing apposition will unquestionably decrease the time required for union and I am satisfied that electricity, with massage in the hands of a competent person, will accomplish

even more. In the treatment of swelling and pain, a current producing diathermy for fifteen minutes at a sitting, thoroughly warming the entire area, is of distinct benefit. This does much to relieve both the pain and the swelling. This treatment, in my opinion, should be given soon after the splints are applied. In recent fractures we use diathermy, applying the electrodes beyond the ends of the splints stimulating a large portion of the limb, increasing the nutrition of the parts, and tending to guard against active congestion and degeneration.

One applies the use of physiotherapy in the treatment of purely functional cases with considerable reluctance because it is in these cases that it has been most flagrantly abused by charlatans and cultists. I am entirely unable to say what it will actually accomplish in these cases, but in organic conditions there is not the slightest doubt of its value. Practically every post-casual condition, except infection and malignancy, will improve under scientific physiotherapy employed in overcoming shortening of the fibroelastic elements in tendons, softening and freeing adherent scars, and in the relief of pain and swelling. Incidentally, serious physiotherapy carried out by the scientific masseur who understands anatomy, physiology and pathology must not be confused with the absurd massage gymnastics commonly found in our barber shops or Turkish bath establishments.

Incontestable evidence of the value of recently developed physical after-treatment has been given by Major Chas. P. Hutchins from his experience at Fort Sheridan, where 4,700 beds were assigned to patients undergoing reconstructive treatment. In many instances, the cures and improvements obtained are quite astounding.

Negative galvanism, which attracts hydrogen, may be successfully employed to overcome cicatricial contraction. It is remarkable how the scars can be freed. Almost without exception scars tending to limit free joint action are improved or yield entirely, become soft and cease to retard function. In my own experience, a slow sinusoidal current is best for employment in positive muscular exercise.

The success obtained in the employment of heat depends very largely upon the depth to which the heat is conveyed. On this account, hot water bottles, hot poultices, and fomentations

are of little value except in superficial conditions and to promote drainage by keeping the serum from coagulating. The rapid circulation in the blood-vessels promptly carries away the excess heat.

Radiant light, which penetrates from two to four inches in tissues, is more satisfactory. Local treatment by electricity in the form of diathermy, produced by passing high frequency current through the tissues, is far more valuable than either in increasing phagocytosis, metabolism and nutrition. The tissues are uniformly heated through the electrodes up to about 110° Fahr., thus rendering the tissues hyperemic for a considerable time.

As is generally recognized, fibrous and scar tissue may cause considerable pain by entrapping a nerve filament and may limit motion in joints and restrict the function of tendons and muscles. This is improved by therapeutic lamps, massage and hydrotherapy or by hypotential current. The softening influence of the negative galvanic poles when applied by proper technique is well established.

In case of bony ankylosis, of course, treatment must be instituted during the activity of the pathologic process which produces the ankylosis. Fibrous ankylosis is quite amenable to physiotherapy and especially to diathermy, the results often being very surprising.

Medical ionization is often used very satisfactorily in connection with galvanism. The treatments are given on alternate days, but some little discomfort is experienced by the patient.

The harmless effect of diathermy has been demonstrated by Captain Sampson in the following experiment:

A thermometer was placed two inches under the skin of a rabbit and a 200-watt leucodescent lamp was used for ten minutes with the result that there was an elevation of temperature of two degrees. With a 200-watt incandescent lamp placed in the same manner there was no elevation of temperature. He then employed diathermy, using 600 milliamperes for 15 minutes without the slightest degeneration or injury to the tissues. We know that diathermy used in a similar manner will elevate temperature of tissues 10 or 12 degrees, at almost any depth.

Radiant heat and light have supplanted ordinary heat in therapeutic procedures since the

heat penetrates deeper into the tissues and reaches a higher degree of elevation and at the same time there is unquestioned benefit in the light itself. Open wounds and old indolent ulcers heal much more rapidly under the influence of radiant heat and light with far less pain and with the least possible scarring.

Conductive heat illustrated in the hot water bottle has very distinct limitations of usefulness. It cannot transmit any high degree of temperature to the tissues and is not without danger. In the use of diathermia the degree of heat is absolutely controlled by the operator who should be acquainted with the basic law of its administration. The amount of heat generated in any given tissue varies with the resistance of the tissue, the higher degree of resistance being found in bone, callous, or dense fibrous tissue. With a few simple facts borne in mind, diathermic treatment is entirely without danger and not only is it painless, but it distinctly relieves pain, many patients stating that there was no pain or discomfort experienced after the first treatment.

Hydrotherapy is employed in the after-care of emergency cases, preferably on account of its stimulating and eliminating effect. The most intense stimulation is afforded by alternating heat and cold, this process materially relieving congestion.

Electricity is employed frequently because of its polarity effect. The positive pole is sedative, acid in reaction and attracts oxygen. It is a vaso-constrictor and is strongly antiseptic. The negative pole is exactly the opposite. It is stimulating, alkaline, attracts hydrogen, is a vaso-dilator, and is not antiseptic. Its chief use in these classifications is in ionization for the loosening of scars where chlorine or other drugs are used from the negative pole. Electricity is employed for muscle stimulation in the form of a slow sinusoidal current. This exercises weak muscles and is not painful.

The faradic current is employed for limiting degeneration and for the relief of pain. In cases of neuritis and in sprains, the static current is used. The most skeptical will become enthusiastic at the results obtained from the proper application of the static wave in sprains.

In sketching thus briefly the possibilities of physical therapy in the after-treatment of trau-

matic cases, I desire merely to suggest to those who are present the great advantage that may be attained by the utilization of these relatively simple theapeutic means which are familiar to us all and which we have permitted to be appropriated by irregular practitioners and quacks. Employed intelligently in conjunction with established medical or surgical procedure—it promises much.

DIFFERENTIAL DIAGNOSIS OF DUODENAL ULCER AND GALL-BLADDER DISEASE.*

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I might tender apologies to the members of this association for presenting a paper for your consideration on what seems an old hackneyed subject, if it were not for the fact that, notwithstanding increasing experience gained by seeing an increasing number of patients as time goes on, with one or another of these conditions, notwithstanding improvements and refinements in diagnostic measures, gastric contents and stool examinations, tests for cholesterinemia and apparently, I say apparently advisedly as you will see later on, unfailing aid offered by Roentgen examination, there seems to me to be more difficulty in definitely differentiating duodenal ulcer from gall-bladder disease than heretofore.

The difficulty in diagnosis would appear to rest in the following points: 1, the similarity of the history in both conditions; 2, the comparatively few positive physical signs in either case; 3, the uncertainty and lack of definite diagnostic import in many of the results of laboratory examinations; 4, the close resemblance in many instances of the reports of x-ray examination in duodenal ulcer and gall-bladder disease.

I do not intend to enter into a detailed description of the symptoms and signs of either condition, but will aim to point out a few essentials in both which may prove of value in making a diagnosis.

The important points in the diagnosis of duodenal ulcer are as follows: The history of a single period or of periodic attacks of burning, cramping or colicky pains coming on one or more hours after eating and relieved by the

taking of food, water or alkalies; the occasional nocturnal burning and distress similarly relieved; the presence of hyperacid stomach contents and occult blood in the stools and a definite disturbance in the conformation of the duodenal bulb, often associated with a definite pressure point of tenderness during the fluoroscopic examination. The physical findings are notorious for their absence. That these facts do not always lead to a correct diagnosis can be readily shown by reference to numerous instances where the very same symptoms were followed later by attacks of biliary colic and at operation were shown to be the result of cholecystitis and pericholecystic adhesions involving the duodenum. On the other hand, patients are occasionally seen in whom the typical signs of duodenal ulcer are never present, or at most are only slightly suggested, but who give a history of acute lancinating pain in the right hypochondriac region, a pain which radiates to the right scapula, and on examination reveal more or less tenderness in the right upper quadrant of the abdomen. There should be no hesitancy in diagnosing gall-stones or, at least, cholecystitis in this instance. Yet I have seen patients with just such histories present at operation large ulcers of the duodenum with but few periduodenal adhesions. Mistakes in diagnosis of the kind just related make it necessary to enter upon a critical study of the various symptoms of these conditions.

The Patient's History: In over 75 per cent. of the cases a careful history will offer the best clue as to the diagnosis of duodenal ulcer. Atypical histories are the exception. The recital of a train of symptoms in which there is regularly recurring pain an hour or more after meal time, never occurring before breakfast, more prone to occur after eating solid foods, meats or highly spiced foods, often occurring, as the patient puts it, just before eating or when he is hungry and frequently awakening him at one or two a. m., should leave little doubt as to the condition in the majority of instances. Often the patients are afraid to eat on account of the pain excited by food taking. Occasionally, however, the first symptom of duodenal ulcer may be a profuse hemorrhage or sudden perforation. It should be remembered that heart-burn and cramp do not always occur. Frequently the patient notices only an occasional attack of heart-burn, but re-

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peated distress, discomfort and fullness in the epigastrium.

These symptoms just mentioned, i. e., distress, discomfort and fullness, while occurring only occasionally in ulcer, are very commonly found in gall-bladder disease. Particularly is this the case after the patient has partaken of a large meal. The sensation of fullness and distention, the frequent belching and the sensation of choking and distress in the precordium rising to the throat are more frequently found in biliary disease. Nocturnal distress occurs in this condition as well as in ulcer. While the distress in ulcer is apt to be of the burning, cramping type, that of gall-bladder disease is more that of a difficulty in getting one's breath. Unless more than superficially inquired into, this symptom may suggest a form of asthma. It is important to remember that thoracic distress with a sensation of oppression in the right hypochondriac region, even though associated with regularly occurring distress after food taking, should turn one's attention to the gall-bladder region rather than the duodenum. A history of *jaundice* may be obtained in gall-bladder disease, but never in ulcer.

Vomiting in uncomplicated cases of ulcer is not common. In the presence of obstruction from pylorospasm or actual stenosis, vomiting is common. A careful consideration of the time of occurrence of vomiting, which is generally several hours after eating, the relief of distress by vomiting, and the presence of gastric stasis as evidenced by testineal and x-ray examination, are suggestive of ulcer. Vomiting in gall-bladder disease may occur immediately after eating when it is more of a regurgitation, particularly after a heavy meal. Instead of being afraid to eat, the patient suffers from a loss of appetite.

One word as to the recurrence of attacks. Just as in ulcers, so in gall-bladder disease, the patient will complain of more or less regularly recurring attacks. I do not refer to the severe attacks of biliary colic with jaundice at one time or another. I refer to the attacks of distress, discomfort, pain or heart-burn which come on at more or less frequent intervals and are the symptoms which offer the real difficulty in differentiating this condition from duodenal ulcer. The symptoms of duodenal ulcer stretch over a period of several weeks, leaving the patient quite

comfortable in the interval, in spite of any kind of food indulged in. This is not usually the case in gall-bladder disease. The periods of distress, if at all recurrent, are prone to be short. A few days of considerable discomfort alternate with periods of lessened discomfort. The patient soon learns by experience or advice that restrictions in diet are necessary. Unfortunately, however, long periods of complete freedom from discomfort are rare. Distention, fullness and discomfort after food taking seem to be always present. In women heart-burn may appear for the first time during pregnancy or puerperium.

The physical examination: There is little to say about the physical signs of duodenal ulcer. Occasionally a point of tenderness to the right of the middle line on a level lower than that of the gall-bladder region may be found. The Boas point of tenderness is too rare, and even if found, too indefinite to be of any value. This, however, does not hold for gall-bladder disease. The presence of pain on pressure in the right hypochondriac region or the limitation of thoracic expansion on account of the pain which is elicited when inspiration is attempted while the fingers of the examiner are hooked under the right costal arch is one of the most important points in the differential diagnosis. Tenderness in the right hypochondriac region very rarely occurs in ulcers unless there is a coexisting gall-bladder disease. The presence of a large palpable gall-bladder leaves little to be asked for in the diagnosis. This, however, is an infrequent condition and for the physician is often wanting just when its presence might be of the greatest value. Occasionally a very large gall-bladder may be mistaken for a palpable kidney.

Laboratory tests: The presence of occult blood in the stools is suggestive of duodenal ulcer. Recently occult blood has been found in ulcer in duodenal contents aspirated with a Rehfus tube. Cases have been reported where gastric hemorrhage occurred in gall-bladder disease and under these circumstances showed occult blood in the stools. This condition, however, is too rare to require consideration. Otherwise, occult blood never occurs in the stools of the patient with uncomplicated gall-bladder disease. The results of acid titration tests are too variable to be of any value. Some writers say that low acidities are more commonly found in gall-bladder disease

than in ulcer. I will not burden you with statistics. Suffice it to say that normal and low acidities occur with sufficient frequency in duodenal ulcer and normal and high acidities in gall-bladder disease to render negligible the taking into consideration the acidity of the gastric juice as a positive diagnostic sign. One point might be mentioned but not emphasized. Bile in the gastric juice may occur more frequently in gall-bladder disease than in ulcer. Some writers refer to the color of the duodenal secretion obtained with the duodenal tube. The color of the bile is no criterion of its infectious character. At operation, clear bile showing bacteria in culture may be obtained from the gall-bladder.

X-ray examination: In by far the greatest number of cases the fluoroscopic and plate examination will prove of inestimable value in the diagnosis of duodenal ulcer. The presence of a duodenal defect with or without hyperperistalsis and gastric residue is of the utmost importance. In gall-bladder disease the presence of gall-stones on an x-ray plate tells the tale. However, all patients in whom gall-stones are found on a plate are not necessarily suffering from their presence. About 10 per cent. of autopsies will show stones in the gall-bladder when no symptoms of the trouble existed during life. Occasionally the gall-bladder may be visualized on a plate, even in the absence of stones. If such a gall-bladder is greatly enlarged and symptoms of gall-bladder trouble are present, no difficulties in diagnosis need exist. Occasionally a large gall-bladder will not show, but will leave its imprint on the duodenum as a depression on its upper or mesial surface, the so-called gall-bladder seat. Two patients whom I had under observation recently with symptoms of duodenal ulcer showed characteristic defects of this character. Ulcer treatment gave only partial relief. Operation revealed enormous gall-bladders and cholecystectomy gave complete relief. Tenderness under the right costal arch during fluoroscopic examination where a complete duodenal cap is seen in its normal location is very suggestive of gall-bladder disease. Very frequently a defective duodenal bulb will be found close to or underneath the right costal arch and be immovable. This is the type of case that offers the greatest

difficulty in differentiation. If the duodenum is not defective there is no doubt of the condition being one involving the gall-bladder with secondary involvement of the duodenum by adhesions. If a defective duodenal outline is obtained the question arises as to whether there is a primary gall-bladder trouble with adhesions involving the duodenum, or vice versa. The presence or absence of pylorospasm will not solve the question because both duodenal ulcer and gall-bladder disease may be accompanied by pylorospasm. A mild grade of gastric retention may be present in gall-bladder disease. Atropine may here be of value. A re-examination of the patient after a preliminary injection of 1/50-grain atropine may show a disappearance or lessening of the spasm of the pylorus or duodenum if the lesion is in the gall-bladder. However, if actual organic adhesions, resulting stenosis and defective duodenal bulb are found, atropine is of no value. Under such circumstances the history must be gone over again very carefully for any possible clue as to the trouble. The sex of the patient may be taken into consideration. Gall-bladder disease is far more frequent in women, duodenal ulcer in men. A very high acidity may lean towards duodenal ulcer. Finally nothing short of an exploratory operation will clarify the situation.

CONCLUSIONS

1. A careful history is of the utmost importance.
2. Tenderness in the right hypochondrium speaks for gall-bladder disease.
3. Laboratory tests aside from occult blood in stools in ulcer are of little value.
4. X-ray examination shows whether the lesion involves the duodenum, gall-bladder region or both, and occasionally reveals the presence of gall-stones.

DISCUSSION

(Abstract)

DR. A. A. GOLDSMITH (Chicago) does not consider the finding of occult blood in the stools of great value. When the ulcer is shallow and small we have often never found blood at all, and in a recent case we found occult blood on perhaps four occasions in eight

examinations and the operation showed gall-stones and nothing else.

We very seldom find jaundice in ulcer, either gastric, duodenal or gall-bladder. Jaundice does occur in cases where we have a typical gall-stone attack.

Pylorospasms, occurring as a part of gall-bladder disease, often go under the name of acute indigestion. They occur at night. They are not gall-stone attacks at all but merely contractions of the pylorus and are very severe. They are relieved, of course, by an opiate. He believes many physicians do not realize that these are gall-stone cases.

The majority of patients with duodenal ulcer complain of some distress in the interval or at least they are careful about their eating.

DR. SIDNEY A. PORTIS (Chicago) noted that in patients with gall-bladder disease, the stomach is held usually more to the right than is ordinarily the case in duodenal ulcer. In fluoroscopic examinations you may see at times an enlarged gall-bladder. This is not normal and speaks for gall-bladder disease. Stones do appear at times in x-ray examinations but those are usually the lime deposits and those that do not have lime salts in them do not appear on the screens. An x-ray doesn't mean very much for either gall-bladder or duodenal ulcer but tenderness certainly speaks for more gall-bladder disease than duodenal ulcer, and, therefore, one must be very skeptical in having tenderness in the right hypochondrium.

DR. ANNA WELD (Rockford) thought we should differentiate, if possible, between gall-stones and cholecystitis. A pain that comes quickly and goes quickly signifies as a rule gall-stones. Whether or not this patient is relieved by soda doesn't make much difference, it may be cholecystitis or gall-stones or maybe an ulcer. However, we do have a qualitative food disturbance in gall-bladder which she believes should be emphasized. In gall-bladder trouble you usually have one article of food that the patient can't eat such as baked beans or raw apples or possibly some other food.

If you ask the question in the right way, the patient will admit that there is one article of food that distresses him.

DR. LEON BLOCH (closing discussion): There is just one point in which I do not agree with the previous speaker; I don't believe we have to go into detail in the differential diagnosis of cholecystitis and gall-stones because we may have gall-stones in the gall-bladder without any symptoms. What causes the symptoms is not so much the gall-stones as the presence of inflammation in the biliary tract.

Kerr, in a series of over 2,500 cases that he had operated upon in his clinic has shown that time after time gall stones were present when no colic had occurred, and frequently a history of colic was obtained when cholecystitis only, was found at operation.

THE PROGNOSTIC AND DIAGNOSTIC VALUE AND INTERPRETATION OF QUANTITATIVE WASSERMANN REACTION.*

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According to modern conception the Wassermann test for syphilis is principally a biochemical reaction between a lyptotropic substance found in the blood of syphilitics called the reagin, and the lyptoidal extracts of normal tissues called the antigen, in the presence of alexin known as complement. The alexin or complement employed in the test acts like an enzyme in bringing about the union of the reagin existing in the syphilitic blood and the antigen; this reaction is quantitative so that to bring about the reaction between the lyptotropic substances in the syphilitic blood and the antigen employed, a known amount of alexin or complement is used up. This enzyme (complement) is destroyed after performing its function, and in this respect differs from the ordinary enzymes. This being the fact, the capacity of work which it performs is measured by a titration.

The only quantitatively variable factor entering the test is the patient's serum or syphilitic substance—the other reagents are added in known quantities; therefore, to find the amount of syphilitic substance in a blood we determine the amount of added complement used up in bringing about the reaction which causes the union of reagin with the antigen.

It is generally accepted that the development of syphilitic substances in the blood of an infected individual is gradual, as is its disappearance in response to treatment; therefore, the quantitative Wassermann reaction and its proper interpretation is the guiding mile-stone in the inauguration and progress of treatment.

The interpretation of our quantitative Wassermann reactions is based upon a special study of 5,000 cases. In our technique of the Wassermann test we add to the blood to be tested a quantity of antigen and complement, which we know an untreated case of secondary syphilis will use up the complement entirely,

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and in a known non-syphilitic blood will not be used up at all. After a certain time of exposure to incubation temperature we determine the amount of complement left by the application of an anti-sheep hemolytic system.

By so doing we indirectly find the quantity of syphilitic substance present in the blood as compared with a known syphilitic and a known non-syphilitic standard; the former being expressed as 100 per cent. positive and the latter as negative. Any variation in the numerical quantity, therefore, indicates the standing of the patient between a standard syphilitic and a non-syphilitic case.

Class No.	NAME OF GROUPS OF CASES	Total No. of Cases	None Neg.	Amount of Added Complement Used Up				
				20 % Pos.	40 % Pos.	60 % Pos.	80 % Pos.	100 % Pos.
				20 %	40 %	60 %	80 %	100 %
1	Untreated cases with Negative History and Negative Clinical findings...	486	460	16	8	2	...	...
2	Untreated cases with Negative or Doubtful History and Positive Clinical findings.....	1240	365	117	162	286	148	162
3	Untreated cases with Positive History and Negative or Doubtful Clinical findings	1032	180	280	306	160	62	44
4	Untreated cases with Positive History and Positive Clinical findings...	1442	18	162	116	401	365	380
5	Treated cases of Syphilis	800	322	216	162	80	20	...

As shown in the accompanying table, the 5000 cases are divided into five distinct classes, according to their history and clinical status, and the reaction obtained in these cases being again divided into five groups according to the amount of complement used up.

A glance at this table reveals that the maximum number of each of the five classes occurs in one of the five groups of reaction; consequently it becomes necessary to interpret each percentage of reaction, according to its relation to one of the five classes given in the table.

In concluding our study we found that if the percentage of reaction indicates the relative amount of syphilitic substance present in the blood of an individual, each group of percentage reaction will necessarily require a different method of treatment with special regards to the inauguration and extent of same and, therefore, interpret our reactions as follows:

Positive 100 per cent: This reading is diagnostic in all stages of syphilis. The intensity of

the inauguration of treatment and the subsequent management of the case depend upon the clinical and physical conditions. A 100 per cent. positive reaction from a laboratory standpoint represents syphilis at its height, that is, at a time when the body resistance is lowest and the blood contains a large amount of syphilitic substance. In a new case, this condition is one of gradual progression, and is usually reached about three or four weeks after the appearance of the primary lesion. Therefore, in the early stages of the first few weeks the Wassermann will be of lower per cent positive, gradually increasing with the systemic invasion of the disease and the relative lowering of the resistance. During this period the examination of the suspected lesion for Spirocheta is important.

Positive 80 per cent.: This group is also diagnostic in all stages of syphilis. The lower percentage may be due to the individual's high personal resistance, or to a lesser virulence of that particular Spirochetic invasion. The management of cases in this group should be considered the same as in the 100 per cent positive.

Positive 60 per cent.: This percentage is diagnostic of syphilis as in the previous groups. The lower per cent findings may be explained in several ways. 1. In untreated cases, it may be due to high resistance or low virulence. 2. In untreated cases, where the disease has remained latent for years (either congenital or acquired cases), and is at this time being brought to light by the lowering of the resistance due to some accident or injury, or intercurrent disease. 3. In treated cases, perhaps supposedly cured, in which an acute exacerbation is occurring.

The history of the present trouble is of importance in this group of cases, as is also the past and family history. However, in spite of a negative syphilitic history, this group means syphilis and any apparent discrepancy can be accounted for as stated. This per cent positive, coupled with the clinical findings, speak for immediate treatment, the intensity depending upon the particular needs of the case, considering both sides, laboratory and clinical.

Positive 40 per cent. This group is considered the same as the 60 per cent. positive group, only demonstrating a lesser or milder degree of the same existing conditions. Treatment is neces-

sary—perhaps in a milder degree, but, as usual, depending on the individual needs.

Positive 20 per cent. This occurs frequently in treated cases and is a check—in comparing with previous tests on the same case—of the adequacy of the treatment. In this class further treatment is necessary, for from a scientific standpoint it is the aim of the clinician to obtain a negative reaction or a series of negative as over a specified length of time, without any treatment during that period.

If this 20 per cent. positive is the first reaction report on a given case, it should be interpreted in only one way. If all other conditions of disease which occasionally produce a positive Wassermann of mild degree (pulmonary tuberculosis, malignant tumors, cerebral tumors, lupus, Hodgkin's disease, dementia præcox, epilepsy, etc.) can be excluded, then this 20 per cent. positive means syphilis. The history and the findings should be carefully studied and considered, and when the diagnosis has been made by exclusion these cases should be treated as in the 40 per cent. group.

The element of doubt in these cases can oftentimes be cleared up in two ways. First, by doing a provocative Wassermann, giving a Salvarsan and taking the blood for a Wassermann on the tenth day following the administration; second, by giving a short course of Iodides, followed by a Wassermann. These procedures often increase the intensity of the test.

In cases where a clear-cut diagnosis cannot be arrived at after careful consideration, it must be remembered in some of the degenerative conditions other than lues that sometimes produce a mildly positive reaction that the administration of Salvarsan and other anti-luetic treatment is efficacious.

Negative: This group means no syphilis. If it occurs in a case with positive history that has had a treatment, it means, from a laboratory standpoint, that the case is cured,—providing a subsequent series of negatives over a specified time without treatment can be obtained.

The conclusions based upon the scientific understanding of the method and reading of the quantitative Wassermann reaction and the division into groups is of essential and practical value to the clinician in the diagnosis, prognosis and treatment of syphilis.

The reduction of the original per cent. posi-

tive and its conversion to a negative reaction in a given case is certainly a scientific estimate of that individual's response to treatment. It is a guide as to the necessary intensity of the treatment and the length of time to be covered periodically by treatment until the negative is obtained—which may be further controlled by subsequent tests at periods—without treatment.

CONCLUSIONS

1. The complement employed in the Wassermann reaction to bring about the unity of syphilitic substance in the blood and the antigen added—acts like an enzyme, and its capacity of work is measured by titration.

2. If, after adding to the blood a definite amount of antigen and a quantity of complement—known to be entirely used up by the blood of an untreated case of syphilis—is added, and after a definite time of action we determine the amount of complement used up, the relative amount of syphilitic substance present is indirectly found.

3. A study of the blood of five thousand cases shows that the positive reactions obtained are divided into five groups, according to the amount of complement used up in the reaction, each group representing a different stage of syphilis, and, therefore, requires a different method of treatment.

4. An interpretation of the five groups of reactions is given, with the diagnostic value of each, and hint to the inauguration of treatment.

5. In doubtful negative reactions the application of a Provocative Wassermann reaction is advisable.

31 North State Street.

REMINISCENCES OF SIXTY YEARS' PRACTICE OF MEDICINE IN EGYPT, SOUTHERN ILLINOIS*

F. M. AGNEW, M. D.

MAKANDA, ILL.

Born under favorable circumstances on the banks of the Little Miami River near Cincinnati, Ohio, in the year of "Tippecanoe and Tyler too," I was thrown on my own resources by an overflow, which did for my father's property, a wool carding and cloth dressing factory, what the Great Miami did for Dayton a few years ago, i. e., destroyed everything in sight.

At the early age of seventeen I went to Indiana

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and taught school to obtain the means to study medicine, until later I came to Prairie du Rocher, near Kaskaskia, and entered the office of two physicians as preceptors—teachers that were a *sine qua non* at that time, but whose instructions mostly concerned the paregoric and hive syrup bottles, keeping the office and prescription vials clean, together with a supply of pills which were all hand-made, they of course supplying the ingredients, while I did the manipulating.

Hence you see that I am what is called a self-made man, and whether this statement relieves the Lord of a great responsibility—is another matter. Having read through the entire system of medicine consisting of Wilson's Anatomy, Carpenter's Physiology, William's Principles of Medicine or Pathology, Pariera's Materia Medica and Therapeutics, George B. Wood's Practice of Medicine, Churchill's Obstetrics, Druitt's Surgery, with Dunglison's Dictionary as interpreter, I entered Rush Medical College sixty years ago last September.

Wood cuts adorned the pages of many of the text-books with figures on the pictures which were explained in foot-notes, and the man who mastered them should have as much praise as the pioneer who felled the trees and burned the brush of the wilderness where Carbondale with all of its institutions now stands.

The teaching force at the college consisted of six professors and a demonstrator of anatomy, and these gave six didactic lectures daily, and we attended once or twice a week the Marine Hospital, but saw little of value there except venereal diseases of the sailors. Some of us were fortunate in attending the lectures of N. S. Davis, founder of the American Medical Association, and of Edmund Andrews, surgeon of the Mercy Hospital where the advantages were all that could be asked. The session closed in the latter part of February, and after a few weeks in my brother's office at Western Saratoga, while he was away, I established myself at Pulley's Mill in Williamson County, as one course of lectures was usually one course more than the average doctor had who already occupied the field.

This was a genuine rural community where corn was a "bit" a bushel, wheat fifty cents and whiskey two-bits a gallon, and there I dispensed

my own medicines, fed, watered, curried and saddled my own horse, and with the messengers rode over hills and valleys at all times of the day and night, mostly at night as the man was at work during the day, leaving all the care of the patient to his wife, and on his going to bed at night, the patient too ill to allow him to sleep, he would get up and go for the doctor—and with my patients I fought all the diseases incident to a new country—mostly malarial, acute dysentery (Flux which used to decimate Southern Illinois about every six to ten years), milk sick and various neuralgias, and went with the stork to 2,117 cases without the loss of a mother in labor.

I graduated from the Medical College of Ohio in 1862 (took an *ad eundem* from the Miami Medical College in 1866), and returned to Pulley's Mill where I entered into partnership with a country doctor who had never seen a medical college or read a medical book save Watson's Practice of Physic, which to this day is a classic, and with which he was as much at home for all diseases incident to this climate as the elder Booth was with Shakespeare, and a better judge of diseases I have never met, as he seemed to be intuitively endowed with a special gift. He had the practice, I had the theory, which are not always identical.

I was told that I was the second graduate in Williamson County, although there were near a half-score of "doctors" in Marion, the county seat. Many of them having experimented awhile with calomel and quinine in their own families for chills and fever, began to give their neighbors treatment and being successful, continued until they could not work the farm. Some of them were conscientious and refused to go farther than they knew they were safe, while others filled the proverb that "fools venture where angels fear to tread."

A man in a fight was slashed in the left side with a knife, leaving a gash five inches long, just cutting the spleen, and gaping nearly two inches wide. When the nearest doctor was called, he spread a cloth thickly with mutton tallow and sprinkled it thoroughly with burnt alum and placed that over the wound. This being told to the first President of this Society, he declared that "that was splendid theoretical surgery, the alum was to pucker it and the tal-

low was to heal it." The practice of some of these men, especially in pneumonia, compares very favorably, so far as success is concerned, with the doctors of today.

This was the beginning of the great Civil War, and while my brother was a surgeon throughout the war, I did the practice over a scope of country from Jerusalem on the west to Pulley's Mill on the east, that is now occupied by more than a dozen physicians. Medicines were costly and hard to get, but my brother, who was my senior in medicine as in age, had taught me to use "Squibb's only," and as quinine cost six dollars per ounce, all kinds of substitutes were tried with more or less success, especially the vegetable bitters.

Alkaloids and resinoids were used to a great extent, especially salicin from the black willow, cornine from the dogwood, prunine from the wild cherry, vervain from the verbena hastata—the present remedy for epileptoid diseases—and last but not least, the tela aranea (Spider web), the latter of which I have used basketfuls made into pills with sorghum molasses and flour, and they cured the chills, or there were a great many wonderful coincidences that amounted to the same thing.

However, the testimony of Drs. Gregory and Jackson in Watson's Practice that the Spider web succeeded in curing chills where even the bark (the mother of quinine) failed, induced me to give it a fair trial. Piperin, a resinoid of black pepper, was also given by me, and certainly is a dependable capillary stimulant. I used to make pills all day of quinine, salicine, chenoidine, capsicum, ferri ferro-cyanuretum, as a succedaneum to quinine to keep chills away, as the spores will hatch in seven days or some multiple of seven. Compound tincture of cinchona was a great remedy, but "awful" to take. So also Warburg's shot-gun tincture.

We also had for competitors the "Granny Women" of the country, and I never saw but one who knew anything of the science and art of midwifery, and she was well posted on Spratt's Midwifery, a splendid work for a midwife, and she had the only copy I ever saw, and even that did not enable her to differentiate between the fontanelles, and in justice to that lady

I must say that I have the same difficulty even to this day, and "there are others," as I find by calling counsel.

Most of them had in their reticule (the female name for pill-bags) blue cohosh, black snake root, Virginia snake root, and sanguinaria, which they usually gave in teas as indications required, and if you don't believe in their efficacy, try one dozen Abbott's caulophyllin (blue cohosh) granules, 1/6 grain doses, every quarter of an hour in a case of gristly undilatable os uteri and watch it expand. Also give macrotis, cimicifuga, black snake root, for pains of rheumatic charthat seems to flow all over the person, then give polygala senega (Virginia snake root) for any trouble with the lochia and you will be surprised.

Lastly, if you have a case of amenorrhea whose etiology is not a nine months' cause, give the blood root, and you will say that it beats all the emmenagogues made in France, and so those good old medical samaritans were productive of much good.

A favorite home-made poultice was the first subsoil rubbed to a powder on a doughboard and oiled with opossum oil and mutton tallow and this in the 60's was the best deodorant we had for foul-smelling sores.

But I could go on and say as a poultice nothing exceeded tansy for the bowels, hops for the chest and poppy flowers for the head, but I have written enough to show you that I have come up through great tribulation to the present elegance of medicine. As I have said, our diseases were mostly malarial, and curing that you also cured their various complications such as rheumatism, neuralgia, kidney and liver diseases.

Our universal weapon to fight malaria was first calomel, hydrargyrum chloridum mite, to effect, then quinine for the acute and iron and arsenic for the chronic stages. The iron par excellent in my hands was what is known in medical journals as the "Brodnax Iron Tonic," which is made by taking an ounce each of pure hydrochoric and nitric acids and adding 60 grains pure sulphate of iron. Of this take half ounce, add two ounces of water, add one drachm of specific nux vomica and fill up the four-ounce bottle with elixir lacto-peptin, and direct thirty to sixty drops from three to six hours apart in

much water, and I don't believe any other chalybeate will equal it.

As to quinine, "how much?" Professor J. Adams Allen of Rush Medical College in 1860 said: "Gentlemen, they tell you that the third pernicious, malignant or congestive chill will in all cases invariably kill the patient. Don't you wait to see whether it will or not, but put 100 grains of quinine into his anatomy in the next twenty-four hours, and the doctor who fails to do it—and the patient dies—should be prosecuted for malpractice and indicated for manslaughter." This I have followed with success in all cases including myself, having taken 100 grains in twenty-four hours—twenty grains at a dose without cinchonism.

How much quinine can be given to the ordinary patient safely? Samuel Henry Dickson, the eminent professor of medicine in Philadelphia, Charleston, S. C., and the University of New York, in his "Elements of Medicine," which was followed as faithfully by practitioners in that day as is Osler in the present day, and he lacked all the elements of being a medical nihilist—on the subject of Congestive Fever, page 262, says: "I have known 60-grain doses (of quinine) repeated thrice in 24 hours and an ounce to have been given in the same course of time."

Yet he declares: "These doses seem to be unnecessarily, wastefully and dangerously large, and that 5 to 10 grains every hour is better, for this remarkable drug presents the seemingly incompatible qualities of acting with rapidity and of reaching slowly its maximum point of action."

He also says that "Bazire of Martainville died from the effects of 900 grains; his wife recovered with difficulty, having taken 300"; but for what purpose or under what circumstances they took it, is not stated.

Many country doctors had their convalescents take two parts dogwood, two parts yellow poplar and one part wild cherry barks, boil to a strong syrup in a covered vessel and add equal parts good whiskey and serve *ad libitum* at the breakfast table, and for iron directed them to go to the blacksmith shop and get a handful of anvil dust and put it in a quart of good apple vinegar and supplement the other with it, and the way they improved both in appearance and strength would put nuxated iron in the discard.

But J. R. Nichols, the eminent chemist of Boston, puts the quietus on bitters with his elixirs of bark and iron and others.

We had from one to three cases of typhoid fever each year with no more idea of its being contagious or infectious than honesty is, and I never thought it dangerous to be about it, until 1871 when I had three families six miles apart where every member of the family had it, and even the neighbors who came to nurse them took it. At that time there was not a fever thermometer in this county (although invented in 1866), and I got the first one from Tieman of New York—a little bent glass tube about three inches long, for which I paid \$5, and it had to be read *in situ*.

These cases made all of us "sit up and take notice," and I consulted all the medical works in reach from Thomas' Practice edited by David Hosack, Professor of Medicine in the New York University in 1816, who called it typhus gravior, putrid or malignant fever on down through Eberle, Daniel Drake, George B. Wood, who called it enteric (or bowel fever), on to Murchison, who called it pythogenic fever (literally, born of putridity), down to Trousseau, who called it dothinertertia (literally, boils in the bowels), and the man who reads carefully and studies intelligently Trousseau's description of it in his "Clinical Medicine" will have a better idea of it, and better indications for his therapeutics than he ever had before—providing he is not a therapeutic nihilist.

True, I don't rely on Trousseau's treatment with his tisanes, but I admire his observations and clinical following of the disease and I have medicines in my office that I have perfect confidence in that they will fulfill certain indications in typhoid fever with its critical days of 7.14.18 and 22 as certainly as I know that 10 ears of corn will satisfy my horse's appetite for dinner. True, also, I know that this was all before Eberth discovered the *Bacillus* of typhoid fever, which of course changes the etiology; but the pathology and clinical picture remain the same and the critical days may be observed by the careful clinician.

It was a terrible strain on my manhood to be criticized in my early practice by some of my best friends saying: "Doc, you cured Tom in three days, and he was much worse than Jim,

and Jim's been sick three weeks and no better yet." (Tom had a fulminant bilious fever that took an extra man or two to hold him on the bed, while Jim had a low muttering typhoid from day to day about the same.) It was in vain that I tried to explain that the old Granny Woman could have cured Tom by boiling the bark of the juglans (butternut or white walnut) down to a syrup thick enough to make pills—and which was a useful household remedy, the tradition being if you peeled the bark from above downward it should be called "High-Bobbie-Lorum" and would purge, but if peeled from below upward should be "Low-Bobbie-Hiram," for it would puke, and this to be followed with a quart of wahoo tea, would have cured Tom—probably not as quickly, but certainly, but you couldn't help but feel that the old man believed he was on to your job, and that you were making a "Doctor Bill."

The first State Board of Health in 1877 was a bomb against home-made doctors, and such a scurrying among them to get the coveted sheepskin was a sight to behold, and as we had a great number as well as a variety of medical schools, it was by no means difficult to get the evidence to practice as a graduate of any medical school was all that was required, except ten years' practice in the State, and several schools had "four years' practice" equivalent to one course of lectures.

Dr. Rauch, the first State Board Secretary, was also very lenient in his examinations, especially if the applicant was accompanied by certificates of good character and a petition to allow the bearer to continue his practice, as a number of us think he is worthy and well qualified."

This Association was organized principally by the efforts of one man, Dr. G. W. Schuhardt of Joneboro, who was ably seconded by H. C. Hacker and J. I. Hale of Union County, John McLean of Perry and myself of Jackson County. Dr. Schuhardt wrote the constitution and by-laws and when it came to membership he wrote "a reputable practitioner and a graduate of a medical college." He declared that that was the hardest sentence he had even written, as it kept

out his own father who had been a successful practitioner for nearly fifty years.

There was not a man among the first members who could stand up and give the clinical symptoms of even the itch, except by question and answer, although they were capable practitioners and were posted up to date.

An instance: A poor family moving through the town of Anna camped at the west side of it and were taken sick which, after a time, was decided to be smallpox, and that disease at that time didn't bear fooling with as a Cuban itch. An excellent old lady, knowing their poverty and distress, took them chicken soup and other necessities after night-fall, secretly, and avoiding the guard. Some weeks after the poor family had left, the old lady was taken suddenly violently sick and the oldest and best physician of the town was called to see her, and he failed in making a diagnosis, and called in another of the same grade from a neighboring town, and they both failed to tell "what the matter is." The old lady died and her funeral was attended by nearly all the town, as she was a great favorite. Two weeks later 27 of that congregation took sick of smallpox and fifteen of them died from that disease.

It so happened that the first semi-annual meeting of this Association met in the climax of this wonderful excitement, and both the attending physicians on the old lady were present, but unable to give a word of explanation in public, presumably from stage fright. I gave them the scary head-lines which had been given me by a drummer on the train coming to the meeting requesting the doctors to hold the lines on me to keep me in the path of truth, and when I had finished, Dr. D. S. Booth, then of Sparta, father of our St. Louis nerve specialist, declared that I had given a good description of malignant or hemorrhagic smallpox wherein the virus was so exceedingly virulent that seemingly it could not raise the skin to the accustomed pustules. He, with others from the prairie towns, and especially Dr. John McLean, who was a charter member, put life in the meeting and we have had many interesting and profitable sessions, and the doctors who attended and didn't learn something were certainly very few.

THE X-RAY IN MALIGNANCY*

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In choosing this subject the writer had no intention of exploiting the x-ray as a panacea for the cure of all cases of malignant disease, but of calling to your attention the facts which have been established by careful and competent physicians, who have had a large practical experience with this one potent agency in our battle against one of the most fatal and appalling maladies.

It would be entirely inappropriate in this paper to take up the physics or technique of x-ray therapy, and we shall confine it to a review of facts which should be known and recognized by every physician.

In no field of the practice of internal medicine is the attending physician justified in confining his endeavors in the interest of the sick to a single line of therapy to the exclusion of all other remedial measures, but we must have the hearty co-operation of the internist, the surgeon and the roentgenologist if we would unselfishly accomplish the most for our patrons. The most natural and prevailing tendency of the present time is to confine our studies too closely to our own specialty and to advise our patients in the light we get through the monocle of our own special line of work.

No one method of treatment can be depended upon to cure or even retard the progress of malignant disease in all cases, and we must be willing to combine any or all methods of treatment which will offer the greatest hope of recovery or possibility of the alleviation of the symptoms and suffering of our patients. Surgery and radio-therapy are equally important and in a large percentage of cases both must be used. Electro-coagulation has of late received well-deserved recognition as a valuable adjunct in combating malignancy. It is efficient in many cases where surgery is unsafe or inadvisable.

Unfortunately in the past, for the most part radio-therapy has been confined to the hopeless, inoperable cases, cases where it was apparent to the surgeon that he could offer no hope of recovery to his patient. These necessarily fatal cases have been treated as a palliative measure

with no prospect of improvement, but with resulting discredit to radio-therapy. It may also be said that too frequently the roentgenologist has been over-confident and led his patient to expect the impossible.

Cancer is the great enemy of middle life and old age and measures both for prevention and cure have not advanced in proportion to the increased need. It has been said that one woman in *nine* and one man in *thirteen* dies of cancer. The knowledge that chronic irritation is a great underlying cause of the disease must become more wide-spread. Malignancy is the property of the cell, the stroma is not a part of the neoplasm but the measure of nature's defense. Malignant cells will sometimes be found encapsulated in the tissues of an operative field from which a neoplasm has been removed and occasionally through some agency such as traumatism or disease, the retaining wall is broken down and metastasis occurs after many years of apparent cure. When we consider that a large part of the fatalities are a direct or indirect result of the metastasis, rather than the primary lesion; the problem of how to prevent extension is equally important with that of the removal of the primary growth and when we prevent metastasis we have made a long step forward.

The chief process of development of metastatic carcinomas is through the blood or lymph channels. The cancer cells or particles which are transplanted through the blood and lymph to some distant gland become implanted and start development of cancer cells, with resulting metastatic carcinoma. Cancer cells, which are transplanted into tissues during an operation, at once take on activity and develop rapidly, being deposited into tissues which through trauma have a greatly lowered vitality. Biopsy, or the practice of removing a section for microscopic examination for diagnostic purposes, which fortunately is not at present often resorted to, cannot be too severely or too frequently condemned as offering one of the most frequent factors in the production of metastasis except when the area has been treated by x-ray.

Frequency of Occurrence of Primary and Secondary Carcinoma:

De Vries found cancer at 518 of 3,700 necropsies, and he discusses the metastases found with them, and the frequency and distribution with

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different types and locations of the cancers, and compares his findings with those on record. The liver cancers entailed metastases in a surprisingly large proportion of the cases, and the lung cancers in a surprisingly small proportion. The metastatic lumps are also at correspondingly opposite extremes in size with lung and liver cancers. He was impressed further with the frequency of metastatic involvement in bones; 53 out of 518 cases, and the whole skeleton was not examined so that other instances of this may have been overlooked. In some cases there were multiple metastases in the skeleton, suggesting a blood-borne origin. Metastasis in the skeleton was noted in 7 out of the 19 cases of mammary cancer and in 5 out of the 19 cases of prostate cancer. There were only two cases of thyroid cancer in his material, but in one of these there was metastasis in the skeleton. The metastasis develop readily also in the supra-renals and ovaries but not in the spleen, heart and muscles. In 69 cases of cancer of the esophagus, metastases occurred in the liver in 26 per cent., the larger proportion with low seated cancer. The longer survival with the latter may explain this. Mechanical factors alone are unable to explain metastases with malignant disease, especially the preference for certain organs. The size of the cancer cells does not explain this either. Cancer cells probably circulate freely in the blood stream but die readily. Chemical factors may aid in their destruction in certain organs in which metastasis seems to occur rarely. In Kaufmann's 1,078 cases of cancer (Basel) there was metastasis in the spleen in 8; in these the primary lesion was in the uterus, penis, thyroid, kidney, gall-bladder or stomach. In Mielecki's 487 cases the frequency of metastasis in the skeleton with mammary and prostate cancer was as marked as in De Vries' Amsterdam cases (8 in 18 and 11 in 30). Comparison with other statistics confirms the greater prevalence of primary cancer of the thyroid in Switzerland, and of the lungs at Berlin, but with all the statistics the percentage of organs affected with metastasis is proportionately about the same. The fact that metastasis is so rare with cancers in the larynx and upper esophagus may be explained by the comparatively early fatal termination. The exemption of the muscles from metastasis, the exemption of the brain from metastasis with

gastric cancer (no sign of metastasis in the brain in Kaufmann's 227 cases of gastric cancer and only one in Mielecki's 156 cases), and the predilection of the liver, skeleton and supra-renals to metastasis are insoluble mysteries at present.

In Pfahler's report of carcinomas of the spine, all are secondary to disease of the breast. He urges most strongly the roentgentherapy as producing a healing process in deep-seated tissues as well as the more superficial. One can never claim a complete or permanent cure for carcinoma for in the past a very large percentage eventually shows metastasis and occur in regions where there has been no prophylactic raying.

Mayo says too little attention has been paid to traumatic transplantation of malignant cells during operation. Rough handling of the growth loosens cells which may become grafted on any surface denuded of its normal covering. Operative methods must be devised that will more effectively prevent cell transplantation as well as the traumatic detachment of cancer-infected thrombi into vascular channels—a complication which often causes post-operative metastatic carcinoma of the liver and lungs.

Ross, in an article published in the *Journal of Cancer Research*, has recently advanced a hypothesis regarding the etiology of cancer which seems most plausible. Extensive investigation on occupational carcinoma seems to have warranted him in the theory that mechanical irritation is not the only or even the most important causative factor but that active cell proliferation is the product of fermentation of organic compounds within the tissue, probably a nitrate.

Radio-therapy has been found of great value in the post-operative treatment of cancer. It would appear to be most useful, however, in preparing a malignant area against wound grafting during operation and in temporarily reducing the vitality of the malignant cell. Whether applied as radium, x-ray or heat, it weakens malignant cells beyond the area of destruction. During this period the resistance of the cells is reduced and operation is most efficient; it should not be delayed more than a week or two as the period of increased cell vulnerability is probably short and the connective tissue development which interferes with late operation is rapid. When the use of radio-active agents is properly combined with surgery, operability is increased, mor-

tality is lowered and the percentage of cures is increased. Radio-therapy destroys cells for a certain distance and sterilizes them at a greater distance so that their reproduction is checked. Connective tissue then develops which acts as a barrier to the further extension of the malignant process. There is abundant proof clinically and microscopically of the destruction of cancer tissue and decrease of malignancy and of ineffectual attempt of inoculation into control animals of carcinomatous cells which have been rendered innocuous by pre-operative and post-operative treatments.

Effect of Raying on Tissues and Blood:

Experiments by Murphy and Sturm on over 100 mice show that animals whose lymphocytes have been stimulated by dry heat have a much higher resistance to transplanted cancer than control mice inoculated from the same tumors. Spontaneous cancers were removed from a series of mice, these animals were then subjected to heat for five minutes and re-inoculated at once. Fifty-nine per cent remained free from disease while of the untreated 96 per cent had a recurrence.

X-ray treatments have the effect of increasing the lymphocytes as a result of stimulation on lymphoid tissue. Roentgenologists have not determined definitely whether the therapeutic value of the roentgen-ray lies in the direct or the secondary effect, but it is altogether probable each plays a part and the constitutional effect is through the absorption of the secondary rays by the hemoglobin which in turn is distributed throughout the entire body. The amount of absorption of rays depends upon the density, thickness and atomic weight of the material exposed. The more dense the object the greater will be the absorption. The higher the voltage the shorter the wave lengths and the shorter the wave lengths the greater the penetrating power. The effect on living tissues depends upon the density and also upon the intensity of the treatment, the penetration, the milli-amperage and the length of time of the exposure and the result in proportion, either stimulation, simple retardation or actual death of the cell.

Malignant tissues are more susceptible to the ray than healthy and can be effectually destroyed by one-half to one-fifth the exposure which would

be required to destroy the healthy. Glandular cells are more easily destroyed than those of connective tissue. Malignant tissues are very vascular, being composed largely of cell masses surrounded by an intimate network of blood and lymph vessels. These cell masses must be completely destroyed otherwise the protecting tissues may break down releasing into the circulating channels these particles, which finding lodgement in other tissues are stimulated to great activity forming rapidly fatal metastatic carcinoma. Only about one-seventh of the therapeutic value of the x-ray reaches the lymphatics which are located from one to three inches below the skin.

Nogier says he has been appalled at the histologic findings of cancer cells scattered through the adjoining tissues after apparently complete excision of cancers. Particularly in the breast, improved technic has revealed cells sown through the tissues far back of the primary tumor. They are not seen nor felt, and lie latent till after the operation. This arouses them, and we have recurrence of cancer. For this and other reasons he advocates broad and intensive radio-therapy before the operation, pre-operative instead of post-operative roentgen or radium exposures. This he insists will prove successful beyond anything yet realized to date. Working with Reguad, he has conclusively demonstrated, he reiterates, that it is possible to give enormous doses of filtered roentgen rays, leaving the skin intact. They expose the cancer first, then adjoining regions, and especially the lymph glands which are ordinarily invaded. The operation should be as early as possible, removing all the macroscopically evident malignant tissue. The scattered cancer cells lose all power for reproduction under the exposures and if any embolism occurs during the following operation the embolus is sterile and metastasis is not entailed. The cells in the depths having lost their power of reproduction, die sooner or later and are absorbed. This absorption of cancer cells serves as an immunizing process. All the evidence, therefore, he concludes, is overwhelmingly in favor of radio-therapy followed by excision as the logical treatment of cancer.

The lymphatics undergo sclerotic degeneration under sufficient radiation, this greatly diminishing the caliber and number of lymph vessels and

nodes which are the most potent agencies of the establishment of metastasis.

The ante-operative treatment by x-ray should include sufficient dosage by the cross-fire method to all areas surrounding the malignant tumor in which the lymphatics are abundant as well as the lymph nodes most distant from the site of the proposed operation, never omitting to treat the axillary, supra-clavicular, sub-scapular, mediastinal and epigastric.

Tyler very concisely describes the action of radiation on cells as follows: "New growths are made of vascular structure around which is super-imposed the parenchyma. Due to this structural composition of the new growth it is especially vulnerable to the action of radium and x-ray. The histological action of both of these agents when proper technic is used, is the same, both result, first, in the destruction of the cell nucleus, producing a cloudy swelling in the nucleus and rupture of the nuclear membrane with loss of the identity of the nucleus and cloudy swelling of the entire cell, followed by disintegration of the cell itself. These dead cells are probably carried away by the action of the phagocytes."

F. C. Wood and F. Prime say: "The lethal dose of roentgen rays for cancer cells or the exact quantity of x-ray treatment necessary to kill a cancer cell has not been determined heretofore. Knowledge of such a dose, however, is a fundamental condition for the intelligent treatment of malignant tumors with the x-ray."

The authors made this determination in mouse tumors of high virulence and very constant type of growth. When using 85 kilovolts, 5 ma. of current through the tube, at 23 cm. distance, and a 3 mm. aluminum filter they found that six erythema doses of x-ray were required to kill the cells of a mouse sarcoma. Carcinoma requires about 20 per cent more exposure than is necessary for sarcoma of a connective tissue type. Lympho-sarcoma is much more susceptible to the rays as are also the basal-cell epitheliomata. These figures represent the minimum dosage for a tumor on the surface of the body.

Before the development of roentgenology in examination of the lungs, carcinoma in that region was seldom recognized, as in many cases of extensive involvement the physical signs are so slight as to escape the attention of the most

expert clinician; particularly is this true of mediastinal carcinoma which is entirely inaccessible for examination except by the x-ray. Carcinoma of the lungs is of more frequent occurrence than is generally supposed and it is usually transmitted through the lymphatics. Secondary carcinoma of the lung or mediastinum from a lesion of the liver is more than probable through the central tendon of the diaphragm. Carcinoma of the lung following a lesion in the breast is by the lymphatic circulation, and metastasis from the upper abdomen or the mammary region are frequently the same. Pfahler reports, in the *American Journal of Roentgenology*, July, 1918, upon cases of general carcinoma of the peritoneum and draws the following conclusions: "General carcinomatous involvement of the peritoneum will sometimes yield remarkably, to deep roentgen-therapy."

Summary.—1. All suspected cases of carcinoma or malignancy should have preliminary to operation, a course of x-ray treatments including all the lymphatic glands.

2. Every case of malignancy or suspected malignancy should have first thorough *pre-operative* radiation; second, complete excision of all suspected tissues; third, thorough radiation immediately and at stated intervals afterward.

3. Have every patient return at stated intervals for inspection and treatment.

4. Carefully examine roentgenoscopically and with stereoscopic plates the lungs in every case of suspected malignancy before and at frequent intervals after the operation.

5. Never subject to trauma even to the extent of excising a section for diagnostic purposes, without previous roentgen protective exposures.

6. Keep in mind that extensive carcinomatous involvement of the lung or mediastinum primary or secondary, may not give rise to physical signs which may be detected by the most careful clinician.

7. Because of the fact that the skin will absorb approximately 50 per cent, fatty tissues 60 per cent, and muscle 75 per cent, it is always advisable to remove as much of the over-lying tissue as possible.

I wish to show you a number of slides showing more or less extensive involvement of the lungs or mediastinum, and in many of these the physical signs were so slight as to lead the most careful clinician to suspect the true nature of the disease.

A PLEA FOR THE BED-TIME TOILET.*

C. B. JOHNSON, M. D.

CHAMPAIGN, ILL.

But little exercise of one's imagination is needed to see in the large intestine a sort of vital sewer for the conveyance to the outer world of the most objectional body-waste in the whole systemic area.

The rectum, the lowermost portion of this human sewer, serves the purpose of a reservoir, a kind of vital garbage-bag, if you will, for the temporary retention of this offensive body-waste material.

When and how best to empty this human garbage-bag of its repulsive contents is the theme to which your attention is invited for a very few moments.

First of all, a brief description of the parts involved may prove helpful to a more perfect understanding of my theme.

The rectum, the lowest division of the alimentary canal and so named from its essentially upright position, is six to eight inches in length, communicates by its upper end with the sigmoid flexure of the colon and at its lower extremity terminates in the anus. Like the colon, the rectum has four coats, namely, mucus, fibrous, muscular and serous, or peritoneal. However, its lower one inch is devoid of peritoneum and its muscular coat is heavier than that of the colon. Before terminating in the anus the rectum becomes much more capacious and is, moreover, capable of almost unbelievable expansion and enlargement.

Near its lower extremity the muscular structure of the rectum thickens to form the external and internal sphincter muscles, but which for convenience may be referred to as one muscle. These muscles, or if you please, this muscle, serves to keep the rectal cavity tightly closed. Thus we find the rectum with its lower end, in effect, hermetically sealed for the greater part of the time and its upper end communicating with the sigmoid flexure of the colon, whose contents it is ever ready to receive.

The greater part of the blood supplied to the rectum is from the portal circulation and reaches the parts through the mesenteric and hemorrhoidal arteries and returns therefrom through

the mesenteric and hemorrhoidal veins, both of which last are unsupplied with valves.

Man is one of the few animals that passes the greater part of his life in the erect position. Hence his hemorrhoidal veins—a miniature hoisting apparatus—for about sixteen hours out of every twenty-four, are engaged in the difficult mechanical task of literally lifting the blood and carrying it on through the mesenteric veins to the liver. Liting it, mark you, without check or any rest for, as stated above, the veins through which it passes are devoid of valves. With these facts in mind, what wonder is it that the rectum in its most dependent part is especially liable to congestion and blood-stasis, and that its veins become permanently enlarged and converted into what we denominate piles, or hemorrhoids. So far as my knowledge goes, no animal that walks on all-fours is a victim of this trouble.

Why this immunity? Because in most, or all, four-footed animals, the rectum for practically all the time occupies the horizontal instead of the upright position, and the veins in returning the blood exercise a propelling and not a direct lifting force. Which is the easier? I will answer this question indirectly by asking another. Which would one rather do, lift a bushel-sack of beans or shelled corn and carry it bodily, or pull or push it over a smooth, greased floor?

Yes, man is the unfortunate animal in whom the dead-weight of the blood in his rectum, the most dependent organ in the body, has to be literally lifted along its course. On the other hand, the horse he drives, or rather used to drive, the cow he milks, the dog he coddles and cuffs, the cat that in the old days contentedly purred at his fireside, are all so fortunate as to have the blood in their mesenteric veins easily propelled along the smooth interiors of these vessels and consequently are seldom, if ever, the victims of hemorrhoids.

In truth hemorrhoids is one of the penalties man pays for his much-prized erect position and for his greatly esteemed privilege of walking up and down the earth on his two legs and lording it over the rest of God's creatures.

And here a word relative to that little discussed but, nevertheless exceedingly important bodily function, defecation. Under normal conditions when a given amount of feces accumulates in the rectum, we can well imagine that a

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signal of some kind is sent to the proper nerve-center from which in turn is sent back an impelling force which causes the diaphragm to be fixed, the abdominal muscles to press backward and the rectal muscular tissue to contract upon the fecal mass which impinges against the sphincter and in response that muscle dilates and permits the escape of the contents of the rectum.

The great majority of people average one bowel movement in twenty-four hours, but to this rule there are many exceptions. For illustration, some people in seemingly good health have as many as three evacuations between the beginning of one day and its close twenty-four hours later. On the other hand, there are not a few who habitually pass from forty-eight to seventy-two hours between bowel evacuations and this with no apparent inconvenience or discomfort.

Heberdeen, the celebrated English physician of two hundred years ago, knew a man whose bowels moved only once in a month. And in striking contrast to this, he knew of another man who for a period of thirty years averaged twelve evacuations in each twenty-four hours. To all appearances both of these men enjoyed good health.

Of these two antipodal cases Heberdeen wittily remarked: That the first man must have had a great deal to carry about with him while the condition of the second man was one of perpetual motion.

Dr. Williams of St. Thomas Hospital, London, had a patient whose bowels moved but once in three months. Dr. Burne of the same institution had under his care a girl who, to use his own words, "passed neither flatus nor feces for six months."

Dr. Heberdeen's witty observation that his patient, whose bowels moved but once in thirty days, had a good deal to carry, contained more fact than fancy. It is estimated that the average stool weighs eight to ten ounces. Allowing that in cases of extreme constipation the watery constituents are absorbed till only five to six ounces of an ordinary stool remain, this with the necessary constant addition at the end of thirty days would aggregate eight to ten pounds which at the termination of this period would be in the man's body. Dr. George B. Wood, in his work on the Practice of Medicine, reports a case where on post-mortem thirteen and one-half pounds of hardened feces were found in a man's colon.

As to the bulk of some of these stools in prolonged constipation that of an army officer in Chelsea Hospital, England, half filled a large chamber at one defecation and duplicated this amount twenty-four hours later. I can well believe this, for many years ago, before the modern house came to be, I had under my care a well-educated and a most successful teacher who at one sitting nearly filled an ordinary-sized chamber with feces from his bowels. Had I not seen this with my own eyes, I could scarcely have accepted it as truth. In obstinate constipation, the pelvis sometimes becomes distended and likewise the abdomen. Indeed, this distention may become so marked as in the old days to have been mistaken for pregnancy.

Fifty-two years ago I began the practice of medicine at Chatham, a village ten miles south of Springfield, Ill., and I had not long been in that place when a certain woman was pointed out to me as a sufferer from an ovarian tumor.

As this was in the days of pre-antiseptic surgery, troubles of this kind were very much less certain of relief than is the case today. Hence this victim of ovarian tumor and likewise her friends were all anxious and uneasy.

Just who the physicians were who made the diagnosis in this case I never learned. But fortunately the patient decided to consult the late Dr. B. M. Griffith of Springfield, then in the prime of mature manhood and in the zenith of a most honorable professional career. After a careful examination Dr. Griffith reached the conclusion that the tumor was fecal and not ovarian and this in the face of the fact that the patient had not regarded herself a sufferer from severe constipation. Following out the indication pointed out by the diagnosis, large doses of castor oil were administered which resulted in frequent and copious evacuations and in due time the tumor disappeared and the woman regained her former health.

I had no finger in this pie, that is to say, had nothing whatever to do with the case, nevertheless, enough of its history drifted into my then young physician's ears to prove a most vivid object-lesson in my future professional career.

Here I desire to give the modern house one credit mark which so far as my observation goes, has never been accorded it. I refer to the fact that it in no small measure has contributed to

the prevention of constipation. How has it done this, does some one ask? By so changing the environment of the act of defecation that this call of nature has been converted into one of comfort and satisfaction instead of dread and discomfort which a visit to the old-time out-house nearly always involved. Every elderly and middle-aged person will recall how often, especially in bad weather, this visit was put off and thus was constipation unwittingly invited and encouraged. Today in striking contrast to this there is scarcely a family, even in moderate circumstances, but lives in a modern house with modern conveniences including a closet, comfortably environed in all seasons, and conveniently accessible at all hours.

When for an undue period the rectum, the garbage-bag of the body, becomes loaded with feces that solidifies more and more with the lapse of every hour till the final escape of this hardened irritating mass produces great congestion in the lowest folds of the hemorrhoidal veins.

Owing to certain anatomical facts already detailed, namely, upright position of the rectum and absence of valves in the hemorrhoidal and mesenteric veins, the congestion is slow, very slow, to be relieved, especially as long as one occupies the erect position which nearly every one assumes after defecation in the morning or indeed any daylight hour. Next time the bowels move occurs the same slow-to-be relieved congested condition. Likewise the next and the next till finally occurs permanent blood-stasis in the most dependent portion of the hemorrhoidal veins and we have what? Hemorrhoids!

How can this congestion in the earlier stages be best relieved? By assuming the horizontal position and thus permitting the blood in the hemorrhoidal and mesenteric veins to be propelled along their smooth interiors rather than to be lifted bodily, as it were.

But how many people in active life can afford to lie down for a half hour or more of mornings. Your man of all work has to get to his job and be on his feet all day. Your bookkeeper, whether man or woman, has to be promptly at his or her desk and the sitting position which this necessitates is, if anything, worse than standing or walking all day.

Your active man of affairs will seldom, if ever, take the time early in the day to lie down and

thus assist his heavily burdened hemorrhoidal veins to do their task easier and much more promptly.

What do these facts suggest? Obviously, they suggest, if I am correct in my premises, the advisability of changing the hour of going to stool from any old time between sun-up and sun-down to evening and, indeed, to as near bed-time as possible. This will give the congested and over-distended parts the best possible opportunity to regain their normal condition. And in the event a given individual is a sufferer from hemorrhoids, the burning, throbbing and general uneasiness produced at times of defecation, will be promptly relieved and when morning comes the patient will get up and go about his or her business, all but forgetful of the fact that they were ever victims of rectal troubles, so perfectly comfortable have become those parts.

But, says some one, by far the great majority of people go to stool between the breakfast and supper hours and this from long habit will be very hard to shift to evening time. All this I grant, yet with a little care and effort the change can be made. To aid in this a mild aperient or the use of the syringe will prove most helpful. A simple expedient to move the bowels may be found in the use of a piece of soap which after rounding and trimming to the size of a finger, or a little smaller, is to be moistened and pushed well up in the rectum and in a very few moments a bowel movement will result.

No doubt in many persons the *any-old-time* hour of going to stool is so firmly rooted that a change will be very hard to make. Others can, and when they see the advantage, will change to the evening hour. Finally, if I am correct, relative to the many advantages of the bed-time toilet, children should be trained to go to the closet just before retiring for the night and thus accustom the bowels to move at that hour.

In conclusion permit me to epitomize the points I have tried to make in this paper.

1. Owing to the erect position which man assumes for the greater part of his time and to the further fact that his hemorrhoidal and mesenteric veins are devoid of valves, the parts contiguous to his rectum and anus are particularly liable to congestion.

2. This tendency is increased during the act of defecation; is much increased at this time if

constipation exists; and very much increased if hemorrhoids are present.

3. Assuming the recumbent position immediately after going to stool will promptly relieve any existing congestion of the parts.

4. As practically every one assumes the recumbent position upon retiring at night, the logical thing to do is to bring the act of defecation as near this time as possible.

5. The bed-time toilet once established, much comfort will be experienced. Many cases of hemorrhoids will be greatly relieved, not a few will be cured and an untold number of cases prevented from developing.

6. The man who with knife in hand, goes about seeking, not exactly whom he may devour, but more properly, whom he may cut and carve, will be deprived of some opportunities of incising, everting and stitching sundry unseemly protuberances that hitherto were wont to tease, torment and torture the poor victim.

DISCUSSION

(Abstract)

DR. G. W. RICE (Galena) thought that a teacher, going to her work in the morning with a full bowel, becomes irritable, nervous and cross with her students and he suggested to a school superintendent that teachers, particularly the primary grades, should not go before their classes in a condition of that kind. He quoted a Dr. Winters who treated a man with enormous retention of feces and thereby reduced his girth from fifty to thirty-eight inches.

DR. BERTHA M. VAN HOESSEN (Chicago), in doing operations for repair of the perineum, had been in the habit of measuring, before the operation, the distance between the rectum and the coccyx, and the rectum and the lower border of the symphysis, and found when the perineum was lacerated that the rectum was drawn back so that it was almost over the tip of the coccyx and fully four-fifths of the distance between the coccyx and symphysis was between the symphysis and the rectum. Before restoring the perineum, she does a coccygotomy (cut the muscular attachments from the coccyx), to be sure that at least the rectum could be drawn forward when putting the stitches into the perineum.

A remarkable thing happened in its effect upon defecation. The patients say they have never been constipated since that operation.

This was repeated so many times that she is convinced that one of the factors in constipation is the fact that the coccyx, instead of being loose as it is in lower animals, is under the skin. In the lower animals when the bowels move, the animal lifts its tail and that relaxes the sphincter and the bowel movement is practically dumped but in the human being the force has to come from the abdomen muscles

and the coccyx has to be literally pushed from behind by the abdominal muscles, and, of course, many of us haven't these muscles strong enough to do it.

A CASE OF SYPHILIS OF THE STOMACH WITH NEGATIVE FINDINGS IN THE BLOOD AND SPINAL FLUID*

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CHICAGO

The difficulty of substantiating a diagnosis of gastric syphilis has given rise to much skepticism as to the frequency of its occurrence. For proof, reliance must be placed on the history, the co-existence of syphilitic lesions elsewhere, the Wassermann reaction, both of the blood and spinal fluid, the improvement after anti-luetic management, and the microscopic examination of tissue excised from the stomach. The latter two were used by the author as aids in diagnosis. A complete history may be fallacious, because the presence of a lesion with a positive Wassermann does not necessarily mean it is syphilitic. Although periarteritis and endarteritis speak for syphilis, the finding of the spirochete in the excised tissue is conclusive proof.

Carman¹ has divided gastric syphilis into three types:

1. Simple syphilitic gastritis.
2. Syphilitic ulcer.
3. Syphilitic gummata, hyperplasia, sclerosis or tumor-formation.

According to Cronin², the first case of syphilitic gastritis was reported in 1839 by Andral³, who had cases of chronic gastritis cured by mercury. Pathologists have reported syphilitic lesions of the gastric mucosa in the secondary stage, and in two cases seen in the necropsy room by the author typical eruptive lesions were seen in the lining of the stomach. Fenwick⁴ states that "luetie ulcers are characterized clinically by severity of the pain and vomiting, infrequency of hematemesis, resistance to ordinary treatment, and tendency to recurrence". The pain of luetic ulcer lacks the periodicity of simple ulcer and is less influenced by food. Vomiting may be marked from the beginning.

In the cirrhotic type the roentgen findings are of especial interest. In the gummatous type the disappearance of the tumor under anti-luetic

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management has been noticed by many observers. Eusterman⁵ who has had a large experience with gastric syphilis reports 40 cases in which lesions were demonstrable and they were cured or improved by treatment. He states: "all gross syphilitic lesions can be demonstrated by the roentgen examination but small areas of gummatous involvement, or cases of single or multiple ulcers, characteristic in type, and all cases of syphilitic gastritis especially may easily escape detection." Warthin⁶ has shown in his studies that fibrosis is a very characteristic manifestation of latent syphilis, and in these areas has demonstrated the spirochete.

Carman¹ sums up the roentgen findings of gastric syphilis as follows:

1. Filling-defect of the gastric outline, usually without corresponding palpable mass.
2. Hour-glass stomach (dumb-bell) or the upper loculus may be expanded and the bulbous and lower loculus may be tubular, due to extensive irregular concentric contraction.
3. Six-hour retention less frequent than in other gastric lesions (about 20 per cent.)
4. Diminution of gastric capacity.
5. Stiffening or lessened pliability of the gastric wall.
6. Absence of peristalsis from involved area.
7. Pylorus free rather than obstructed.
8. Patient usually under cancer age and not ill in proportion to the extent of the disease shown by the x-ray.
9. Absence of a niche, accessory pocket, or typical incisura, classic signs of simple gastric ulcer—were notable in all cases, the only exception that being recorded by Portis⁷.

Author's case: G. J. was transferred from the medical to the surgical service of Dr. Victor Schrager of the Cook County Hospital with the diagnosis of carcinoma of the stomach on November 15, 1919. The patient's complaint was epigastric distress which began in December, 1918, as a dull ache in the epigastrium and lasted about two weeks with occasional nausea and vomiting and then was free from distress until May, 1919, which at this time was also of short duration and the distress reappeared in July, 1919, and continued till entrance to the medical service on Oct. 29, 1919. The distress then was a dull pain located just below the umbilicus, sometimes radiating to right costal margin and then to right lower lumbar region. During the radiation, the pain became very severe and lancinating and lasted about one-half hour. The pain came on about 2 hours after eating, pressure then aggravated it, while formerly relieved it. The pain was made worse by food, relieved by bowel movement, but there was no desire for bowel movement at the height of the pain. Hot applica-

tions relieved the pain as did vomiting. He was occasionally awakened at 1 to 2 A. M. with pain which lasted about 20 minutes. The patient felt most comfortable before breakfast. The nausea and vomiting came on 2 hours after eating and brought relief. The vomitus never was black nor red but contained much mucus. His appetite was poor because patient was not only afraid to eat but was also not hungry. Weakness had been gradually increasing, but no numbness nor tingling, nor swelling of the feet appeared. He has had some vertigo, occasional tinnitus and headache but no diplopia nor "spots before eyes."

Past history: Medical—negative. Surgical—negative. Personal—gonorrhea in 1907. Impotent for last year. Denies lues. Marital—one year. Wife has tuberculosis. No children.

Family—negative. No carcinoma in the family. Habits—negative. General—no "shooting" nor nocturnal pains. No tremor. No difficulty in walking. Cardio-respiratory. Slight cough—some dyspnea. Genito-urinary—nocturia once nightly.

Physical examination: Revealed a small well developed and *fairly well nourished* negro about 45 years of age, who was not acutely ill but seemed to have considerable abdominal distress. *Regional*—scalp, ears, face, nose, all negative. *Eyes*—Pupils, pin point—irregular, very sluggish to light but fairly prompt to accommodation. No extrinsic muscle weakness. *Mouth*—Teeth poor, much pyorrhea. Tonsils small and submerged. Throat hyperemic. *Neck*—no tracheal tug—Thyroid small, no adenopathy, no pulsations. *Chest*—Expansion free and equal over whole chest. Lungs—negative. *Heart*—no murmurs—sounds faint and distant. *Abdomen*—There was tenderness just below the umbilicus. There was either an indefinite mass here or a pad of fat or resistance from the recti muscles. The abdominal fat was fairly well preserved. There was no tenderness over the gall bladder, appendix nor ascending colon. *Lower* edge beneath costal margin. *Genitalia*—no scar of the penis. No inguinal adenopathy.

Rectal. Revealed a normal-sized prostate; no tumor masses nor hemorrhoids palpable. *Extremities*—negative. *Reflexes.* Knee jerks, sluggish; Achilles—sluggish. Wrist, triceps, biceps—normally present. Babinski, Oppenheim, Gordon, Chaddock all negative. Cremasteric and abdominal, sluggish. Rhomberg—slight swaying. *Laboratory findings.* Urine—negative. Stool—no blood on two examinations. *Stomach findings* Ewald Test Meal No. 1 100cc returned, Free Acid—0. Total Acidity 22.4, Motor Meal 0 returned. Ewald Test Meal No. 2 102cc returned, Free Acid 0, Total acidity 8.1, Ewald Test Meal No. 3 100cc, Free Acid 0, Total Acidity 14.5, Organic acid absent, Mucus +, Blood absent, bacteria, no Oppler—Boas; no retention, Gunsberg test negative. Blood Hbg. 75, RBC 3,904,000. Whites (WBC) 7,800 Differential Small mono's 24, Large mono's 3, Poly's neutro 68.



Figures 1 and 2. Plates revealing narrowing of the lumen of the stomach.

Poly's Easino 2, Base's 1, Trans. 2, myelocytes 0, cell counted 100. Blood pressure, 135 Systolic, 82 Diastolic, 53 Pulse pressure. Wassermann—Blood (2 laboratories) negative. Spinal fluid—clear, under slight increased pressure Ross-Jones-positive cell count 9 lymphocytes per sqmm. Wassermann negative, two laboratories Lange—colloidal gold, Test 000-22-0000.

X-RAY findings. "There appears to be a small six-hour residue located in the upper portion of the stomach. Subsequent filling of the stomach reveals an incomplete outline of the pars pylorica which extends to the pars media. There is a distinct narrowing of the lumen of the stomach. The appearance is not entirely typical of a malignancy, but this condition may be present."

Operation.

Pathology. There was an infiltrative lesion of the median coats of the stomach beginning at the pyloric border of the middle third and extending up to and including the stomach portion of the pylorus. The stomach was well bound down by adhesions—distinctly lessened in size. On manipulation with Barret forceps the stomach was perforated as the tissue was exceedingly friable. The inner wall of the stomach was free from any masses other than the contraction from the infiltration of its walls. There were no enlarged glands. Technique—Mid-line (upper) incision exploration of stomach and surrounding structures. Perforation of stomach (Barret forceps) sutured and omental flap laid over line of suture. Jejunostomy performed at proximal loop of jejunum and abdomen closed with a gutta-percha drain and in the usual manner.

Pathologist report of section. Histologic: "Microscopic preparations of the specimen revealed gastric mucous glands, in cross sections, all of which were within their normal limits. Some areas of round cell infiltration are present. A diagnosis of carcinoma of the stomach cannot be made from these sections."

Clinical Course. After operation there was some

suppuration along fistulous passage into jejunum, later the tube came out. The wound healed and patient made an uneventful recovery. Vigorous anti-luetic treatment was then employed—patient



Fig. 3. Area of round cell infiltration and gastric mucous glands in cross section.

gained in weight—was practically free from distress and stools have been persistently negative for blood (Weber test).

104 S. Michigan Ave.

1. Carman-Miller: "The Roentgen diagnosis of diseases of the Alimentary Tract."
2. Cronin, M. J.: "The Relation of Syphilis to Gastro-enterological Diseases." *Interstate Med. Jour.*, 1914, xxi, 1019-1035.
3. Andral, G.: "Clinique medicale." 4 ed., 5v. Paris, Crochard, 1839-1840.
4. Fenwick, S. and W. S.: "Cancer and Tumors of the Stomach," London, J. and A. Churchill, 1902, pp. 316.
5. Eusterman, G. B.: "Syphilis of the Stomach." A report of forty cases in which there were demonstrable lesions and therapeutic cure or improvement. *Am. Jour. Syph.*, 1918, ii, 205-219.
6. Warthin, A. S.: "The New Pathology of Syphilis." *Am. Jour. Syph.*, 1918, 425-452.
7. Portis, M. M.: "Syphilis of the Stomach." *Med. Clinics of Chicago*, 1916-1917, ii, 359-374.

DISCUSSION

DR. SMITHIES (Chicago) reported a series of some twenty cases of syphilis of the stomach at the San Francisco meeting of the A. M. A. some years ago. The paper was received with some skepticism. Since that time—about five years—there have been more cases of syphilis of the stomach put on record and followed through, than occurred in the previous five decades. Of our series of gastric ulcers, amounting to nearly 1,100, almost 8 per cent. were luetic. It follows then that we have here a problem in clinical medicine. This is being so impressed upon us, that, in daily practice, we make it a routine to get the Wassermann test on every patient and we do not consider any tumor of the stomach or any chronic ulcer of the stomach as one which would indicate surgical operation until we have had at least two negative Wassermanns, one from the blood and one from the spinal fluid.

The manifestations of the disease are extremely varied. Gastric syphilis simulates practically every known lesion of the stomach.

In our series of cases (and I think our series at present are the largest recorded, numbering now toward fifty) we find that we have a group, few in number, which arises very quickly. The gastric symptoms are practically the only symptoms of the disease; the ailment progresses quickly until the gastric condition simulates either an extensive, severe ulcer or malignant disease. There is another group, comprising about one-fourth of the number where we had a long history, simulating gastric ulcer in practically all its phases with infrequent hemorrhages and where, on top of this previously apparently benign ulcer history, we have a history and physical findings that closely simulates those of malignant diseases, even to the presence of an epigastric mass.

The other group of cases is one in which there have been for a long time various gastric upsets; frequently the patients have had gall bladders removed, and then on top of this period of dyspepsia, which lasts about seven or eight years, we get the development of a continuous ulcer type of dyspepsia or dyspepsia seemingly of the malignant type.

The test meal doesn't help us very much except that there is a tendency for the ailment to occur previous to the age of forty and there is apt to be an early diminution in the gastric acidity. Thus a number of our cases show very low, and some absent hydrochloric acidity in young individuals.

The roentgen evidence is, to a certain extent, significant; but the most experienced men can't differentiate the syphilitic ulcer, of the solitary type from a non-syphilitic ulcer. However, there is this point, luetic ulceration is very apt to be multiple, two, three four or five ulcerations being present. There is apt to be peri-gastritis with a certain amount of fixation of the stomach, but the most expert roentgen man isn't able to differentiate cases of syphilis unless he knows the previous history and the other findings.

It is true, tumors, sometimes cut clean as though they had been punched out with a biscuit cutter are

seen but such may be impossible to differentiate from sarcoma roentgenologically.

The result of treatment in our series are as follows: We are able to say that at least 45 per cent. can be relieved entirely. We have 30 per cent. or 40 per cent. where there is chemical improvement, but in the remaining instances there is no improvement from any kind of treatment because the essential tissue of the stomach has been destroyed or the patient is so starved when he comes that he doesn't live long enough to go through with what might have been a successful treatment. The size of the gastric tumor does not contra-indicate treatment. Six and one-half years ago a doctor called my attention to a man in one of the wards with regard to opening him up again for operation of a large visible tumor of the stomach. An interesting history of this man was that about eight years previous he had been operated on for what was called gastric ulcer. He later developed this large tumor which, of course, was considered a cancer on ulcer and when I saw it it was a tumor as large as a baby's head. The entire pyloric half of the stomach was destroyed. His spinal fluid was three plus. He was put under vigorous treatment. At that time he weighed 103 pounds. I saw him last week and he weighed 176 pounds and there was no trace of his tumor. I thought such a case ought to be mentioned before this body.

Dr. Portis (closing discussion): I want to thank Dr. Smithies for his very splendid discussion of my paper. I am heartily in accord with all he has said regarding the question of Syphilis of the Stomach and I would just like to make this one point in closing and that is that in this particular type of case that I am presenting, while it is clinically improved under very strenuous anti-luetic management the pathological deformity of the stomach is not materially altered in spite of the clinical improvement, in other words the fibrous tissue changes which have taken place in this type of a lesion are not materially helped by specific treatment.

THREE DAYS vs. THREE WEEKS IN HOSPITAL AFTER OPERATIONS FOR HEMORRHOIDS*

J. RAWSON PENNINGTON, M. D., F. A. C. S.

CHICAGO

The English are a very conservative nation, and I shall commence my paper by citing some examples: In the year 1100 Eliza and Mary Chulkhurst, two girl-babies joined together were born in the county of Kent, an example of what we call nowadays, pygo or possibly thoracopagus. They survived for 34 years, when one sickened and died, the twin living several hours longer. (The statement that the last one refused to be separated by a surgical operation, exclaiming

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piously that they came together and would go together, can be safely discredited. It is decidedly doubtful if an operation of this nature would be essayed by the crude surgical skill of that far-off time.) The parents were wealthy, and the "Biddenden Maids," as they were named from their place of birth, bequeathed some land, the proceeds to be expended on a supply of bread and cheese every Easter Monday for the poor of the parish. However, the amount received was considerably more than the poor persons required, and the parish as a whole had a more or less festive time. In addition, up to a few years ago, every stranger present received a roll with a rude effigy of the Maids cut out of dough with a rough wood mould (made in 1814 according to Ballantyne).¹ I understand now the annual revenue is about \$200 in our money.

Survival of these conjoined twins for over 30 years is by no means novel—witness the "Carolina Twins" in the U. S., and the famous Siamese brothers who lived nearly twice as long. The thing of interest is that in a little hamlet in the southeast corner of England, this custom has been kept up since long before Columbus came to America, as far back as the time of the son of William the Conqueror. Plantagenets, Tudors, Stuarts, Cromwell, the Stuarts again have risen and fallen, to be succeeded by the present House of Hanover, yet this nearly 900-year old bequest has kept up unchanged year after year, oblivious to the changes of dynasties.

Several centuries after this a London merchant traveling in Africa had a narrow escape from being devoured by a lion, and in his will devised a certain sum to be paid for a sermon on the anniversary of his escape. This "lion sermon" was accordingly preached many a long year in succession; in fact, I believe it was still in vogue when I was in London some years ago.

The next instance I shall refer to concerns that town in Cornwall—St. Ives—which was endeared to us as children by being the abode of the man who had "seven wives." A year before the close of our Revolutionary war one of the inhabitants passed away and was duly buried under an elaborate monument, which he had built during his lifetime on a hill nearby but overlooking the town. His property was left in trust to the Mayor and Vicar, provided that on St. James' day (July 25), once every lustrum, ten little girls dressed in white, properly chaperoned,

and in company with a fiddler, should march in procession, with the Mayor and Vicar at the head, to his monument. Arriving there they were to dance to the music while singing the 100th Psalm, which you will recall runs thus: "Make a joyful noise unto the Lord all ye lands," etc. We learn from Osborne² that the name of this worthy was John Knill, but it is not probable he was the man with "seven wives," otherwise, he could not have left so much.

We now come to late in the year of grace, 1919, which Mr. Miles, of the Gordon Hospital for Diseases of the Rectum (London), published "Some Observations on Internal Piles,"³ in which he praises Salmon's modified ligature operation. The original method by ligation has been practiced from time immemorial; there is no reason why it should not have been done by the Hippocratic School, though the text is obscure. Nearly a century ago, Mr. Salmon cut a groove at the base of each pile-mass to keep the ligature from slipping off.

I shall not tarry to discuss the technic, but pass on to the after-treatment, and quite agree with Mr. Miles that much of the success of the operation depends on the manner in which this is carried out. Here, however, our paths diverge: First as to pain—he states there is a great deal of after-pain, and it is important to relieve this as quickly as possible. Accordingly, a hypodermic of one-half grain of morphia is administered as soon as patient is back in bed. Then a sedative mixture is given containing opium in four hours, and repeated every four hours for the first twenty-four hours, every six during the second twenty-four, every eight during the third and fourth twenty-four hours until bedtime of the fourth day, when aperient pills are taken.

The patient is kept in bed till the fifteenth day, on the nineteenth the pile wounds will have healed, and on the twenty-first he is allowed to go home.

To this lengthy and complicated procedure, my open method forms a startling contrast. I see very clearly why by Mr. Miles' plan it takes three weeks for the patient to get rid of the infected focus with the pent-up microbes. According to him the sloughs separate on the ninth or tenth day, usually without pain; in a day or two the digital divulsion is commenced to which I shall return presently.

Hemorrhoids may be non-infective in nature; but, as a rule, are infective. The latter variety is due to bacteria which accumulate in the rectal sinuses and diverticula to which I called attention some years ago. As a result of the presence of microbes in these sinuses and diverticula toxins are given off, which in turn set up tissue changes eventuating in dilatation and thrombosis. A few years ago I had specimens of hemorrhoids examined bacteriologically, and besides the omnipresent colon bacillus, various species of pus cocci were found.

In the past quarter-century I have given a fair trial to the ligature method—as well as the clamp and cautery, Whitehead's plan, injections—in fact, every one advocated for the relief of this common affliction, and have emphatically decided that my open method is the best.

Especially is there less liability to stricture, which has too often been a sequel to the ligature, the clamp and cautery—and more particularly the Whitehead method. Mr. Miles evidently has this possibility in mind, for he directs that on the twelfth day the index finger should be inserted to ascertain if all the sloughs have separated, also to smooth out the granulating surface. This digital exploration is to be repeated daily until the wounds have healed on the nineteenth day, and he adds its purpose is to prevent adhesions of the granulating surfaces.

A few years back Anderson published some interesting observations made while house-surgeon at St. Marks Hospital, the first institution in the world to be devoted to rectal diseases. He followed up 300 patients, just half of them operated on by the Salmon (ligature) method, 100 by Whitehead's plan of excision, and 50 by clamp and cautery. As regards pain, the clamp and cautery was far in the lead, none complaining of "severe" pain, (*i. e.*, needing over one-quarter grain of morphin); next came the ligature method with 10 per cent., and the Whitehead naturally with the highest per cent.—18. So far as stricture was concerned there was none in the clamp and cautery series, there was some in 40 per cent. of the ligature cases, though overcome by digital dilatation; but in 5 per cent. there was marked contraction which necessitated instrumental dilatation for six weeks. For the Whitehead method the cases requiring digital and instrumental dilatation were 56 and 8 per cent,

respectively. Lastly, the average stay in hospital was 10 days for the clamp and cautery, 21 days for the ligature, and 26 for the Whitehead excision. You note the stay in hospital is the same as at Mr. Miles' institution.

By my open method the whole focus of infection is removed at one sweep, no infected base is left as in the ligature or even the clamp and cautery plan to close over and keep up the local and constitutional manifestations. After the pile mass is well exposed, an ellipse varying with the size of the mass is removed with flat-curved scissors, frequently excising the pathologic condition in toto; if not, a second and deeper cut is made with scissors. The field is then cleared of clots, bleeding vessels, if any, ligated, and my rubber tampon left in for 18 to 24 hours. After a bowel movement, the average patient is dismissed on the third day, many earlier.

Instead of the three days' preoperative stay in bed on light diet necessitated by Mr. Miles' plan, I have often operated on patients in my office with no preparation save cleansing of the field, and rendering it insensitive by some local anesthesia, and they walked out with no further ado.

An old and time-tried adage is to the effect "seeing is believing," so in conclusion I shall show you some slides of a few average cases.

31 N. State St.

1. Ballantyne, J. W.: *Teratology*, October, 1895, (p. 268).
2. Osborne, Albert B.: "As It Is in England," New York, 1913.
3. Miles, W. E.: *Surg., Gynecol. and Obstet.*, November, 1910, (p. 497).

DISCUSSION:

Dr. Tiernan (Decatur): I would like to ask the doctor to tell us a little more definitely the exact position of his incision, how far from the skin and how far up the cut would extend, how much tissue is taken.

Dr. Pennington—(Closing discussion). In regard to the amount of skin or other tissues that you remove, that depends wholly on the size of the tumor mass. If, for instance it was half an inch across, you would take out a section probably a quarter of an inch wide or a little larger. If it was a quarter of an inch in diameter, you wouldn't want to do that in toto. I don't know any way to tell you except to use your own surgical judgment.

If you have a tumor on the arm, a fatty tumor, you would take out an ellipse and then you would dig out or dissect out the fatty tumor and let the edges come together, or you would bring them together with a suture—how large is that incision? It is impossible to answer that until you see the case. Isn't that right? So it depends upon your own surgical judgment.

ment. That is the only way I know to answer that question.

The angle of the scissors? Well, all incisions are made in the long axis of the bowel. For instance, here is the bowel, and we first operate on the internal hemorrhoids, the whole thing is turned inside out. The scissors are applied in the long axis of the bowel, and you take out your ellipse. If you removed the ellipse in the other direction, you would most certainly have stricture, so it is the long axis of the bowel.

When you are through with that part of the operation, then you finish with the external bowel, and you have skin probably projecting for an inch or a half inch, or you will have little skin tabs. Now, take those out, and take out sections in a way that when you dissect out the tissue, or whatever you have there to remove, and do that also in the same angle of the bowel, and then the edges will come together, as you saw on those pictures on the screen. You saw the angle in which those all go in toward the center of the bowel, just the same as the spokes in a wheel. You want them all to converge in that direction.

Question: No ligatures?

Dr. Pennington: If you have a bleeding vessel, when you amputate a man's leg, what do you do? You ligate it, don't you? Can you give me any reason why you would not ligate a blood vessel when you have one bleeding at the rectum? Put a string around it, that is all. If you have a bleeding vessel, pick it up and ligate it just as you would in any other surgical operation.

FIBROIDS COMPLICATING PREGNANCY SUMMARY*

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1. During pregnancy, women are subject to pathological conditions that influence gestation, parturition and sexual life, which conditions for their relief or cure necessitate operative treatment.

2. Appendicitis irrespective of type or manifestations, does not call for the induction of abortion or premature labor. By timely and skillful removal of the diseased appendix, gestation is not interrupted and parturition will not be influenced.

3. Cholelithiasis complicating pregnancy does not warrant the performance of abortion or premature labor. Appropriate operative measures palliate or cure cholelithiasis and its sequelae, exert no harmful influence on gestation and do not in any appreciable degree impair the expulsive power of the abdominal muscles.

4. Uterine fibroids afflict all races and originate only during the menstrual period of life. They are more frequent than ordinarily suspected, however, no matter if comparatively rare, inasmuch as two lives are at stake, the subject demands adequate study. They antedate, co-exist with, complicate or are complicated by pregnancy, single, twin, or multiple, uterine or extra-uterine. They have been found in nulliparae, deultiparae, and multiparae.

5. Uterine fibroids occur in gravid uteri, otherwise normal, or presenting one or more other anomalies, congenital or acquired. They vary in number, site, anatomical relations, size, shape, consistency, structure, mode of implantation and rate of growth.

6. Uterine fibroids involve the cervix, the body, or the entire uterus. Their relation to the various layers of the uterus is the basis of the following classification; subserous or subperitoneal, interstitial or intra-mural, submucous, and mixed. Submucous and subperitoneal fibroids are either pedicled or sessile.

7. Uterine fibroids like other tissue-masses are subject to inflammatory and degenerative changes which supervene either before or during gestation, labor, or the puerperium. Owing to their low vitality, these neoplasms offer but little resistance to invading germs. Inflammation of a fibroid terminates in gangrene, suppuration or formation of adhesions.

8. Inflammatory adhesions by displacing and fixing the gravid myomatous uterus, interfere with its functions and that of contiguous viscera, and are an important factor in the etiology of dystocia.

9. Uterine myomata are subject to calcification, fatty, myxomatous, cystic, or red degeneration. Red degeneration of fibroids is an aseptic, necrobiotic process characterized by hemolysis and autolysis. Though occasionally met in non-gravid myomatous uteri, it is more frequent, more extensive, and more intensive in uterine fibroids coexisting with or complicating pregnancy. The process of red necrosis may advance to complete liquefaction of the tumor with rupture either into the peritoneal, or uterine cavity and secondary infection.

10. The mechanical, objective and subjective symptoms of uterine fibroids, to a large extent, are determined by the location, number, size, shape, structure, rate of growth, and other char-

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acteristics of the neoplasm. Pressure upon the vascular channels is provocative of edema involving the legs; upon the nerves of the sacral plexus, of pain; upon the intestines, of intestinal obstruction; upon the rectum, of rectal tenesmus, constipation, and alternating constipation and diarrhea; upon the urinary bladder, of vesical tenesmus, frequent, painful and difficult micturition, and in some cases retention of urine.

11. All acute inflammations and all degenerations of uterine fibroids determine marked local and constitutional symptoms of which the cardinal ones are fever, pain and tenderness. Clinical analysis and operation demonstrate that these acute symptoms are due to one or the association of two or more of the following factors:

- (a) Edematous infiltration of tumor.
- (b) Rapid or sudden increase in size of tumor, irrespective of cause.
- (c) Impaction or incarceration of tumor in pelvis.
- (d) Mechanical pressure exerted by the fibroid upon the bladder, ureters, rectum, etc.
- (e) Bacterial inflammation of myoma or myomata, phlegmonous, suppurative or gangrenous in type.
- (f) Degeneration of tumor, fatty, cystic, myxomatous, red.
- (g) Torsion of tumor's pedicle.
- (h) Torsion of pregnant myomatous uterus upon its long axis.
- (i) Peritonitis, localized or diffuse.
- (j) Simultaneous adnexal disease, with or without peritonitis.
- (k) Impending abortion or premature labor.

12. Fibroids by virtue of weight, volume, or location can directly cause any of the various malpositions and displacements of the uterus; pathological anteversion, anteflexion, lateroversion, lateroflexion, retroversion, retroflexion, pelvic incarceration, pelvic impaction, etc.

13. The diagnosis of co-existing pregnancy and fibroids is difficult to establish. The signs of pregnancy may be mimicked by fibroids and vice versa. Some signs, as uterine souffle, bluish discoloration of the vaginal walls, Braxton-Hicks intermittent uterine contractions are common to both conditions. Ballottement and abdominal palpation give analogous findings in pregnancy and movable subperitoneal fibroids.

14. Uterine fibroids, as a rule, impair a wom-

an's reproductive powers, to what extent is as yet not fully determined. It has been observed that myomectomy in women previously sterile has been followed by pregnancy.

15. Uterine fibroids are a grave menace to pregnancy during its entire course. Not uncommonly they cause abortion, death of fetus with retention of ovum in utero, or premature labor.

16. They retard or absolutely arrest the expulsion of a living or dead child through the natural channels and demand the employment of radical means of delivery. The danger to the child's life is proportionate to the amount and nature of obstruction, duration of labor and method of delivery.

17. Fibroids complicating pregnancy endanger the maternal life during gestation, labor and the puerperium, chiefly through hemorrhage and infection secondary to changes in the tumor itself or engendered by it in the fetal or maternal tissues. Placental retention, post partum hemorrhage and puerperal sepsis are imminent.

18. That treatment is most successful which best fulfills the following three indications: the delivery of a living and viable child, the complete removal of the tumor tissue and the restoration of the mother to sexual and anatomical integrity. Timely resort to surgery alone enables us to satisfy these requirements. This is a condition in which watchful waiting must give place to safety first.

19. Operative intervention is imperatively indicated in the presence of the following:

- 1. Bad general condition of mother.
- 2. Intolerable pain.
- 3. Inability to work.
- 4. Dyspnea due to size of tumor.
- 5. Rapid growth of tumor.
- 6. Extreme abdominal distension.
- 7. Kidney breakdown.
- 8. Pelvic incarceration or pelvic impaction of tumor.
- 9. Repeated and profuse hemorrhages.
- 10. Torsion of tumor's pedicle.
- 11. Rotation of uterus on its long axis.
- 12. Gangrene of tumor.
- 13. Tumor degeneration, cystic, red, etc.
- 14. Septic complications.
- 15. Severe pressure on neighboring organs, ureter, bladder, rectum, etc.

16. Size and multiplicity of fibroids impeding the normal progress of pregnancy.
17. Fibroids as a hindrance to birth through the natural channels.
18. Fibroids in the body of the uterus interfering with uterine contractions.
19. Fibroids interfering with the outflow of the lochia.
20. In the treatment of uterine fibroids, the ideal operation is myomectomy, because 1, in the sterile woman, the uterus being left intact conceptions may follow; 2, in the pregnant uterus, it removes the disturbing symptoms and cures the condition without mutilation; 3, it gives gestation the opportunity to continue undisturbed; 4, it permits the delivery of the child through the natural channels; 5, the post-operative shock is mild, the convalescence, short, and the mortality rate for both mother and child is low; 6, the menstrual and generative functions of the mother are retained; 7, if not feasible, it does not preclude the performance of the operative act best suited to the case at hand.

21. The delivery of a living child becomes an important new factor as pregnancy approaches its completion. In gravid myomatous uteri, Caesarean section is to be performed at or near term in all cases in which delivery through the natural passages would inflict serious injury upon the mother and child.

22. For fibroids complicating pregnancy, hysterectomy is the operation of last resort. It is justifiable only:

1. If the woman is near the menopause.
2. If enucleation proves impossible because of volume and number location of tumors or of general myomatous degeneration of the organ.
3. If labor at term would be impossible (contracted pelvis) and the woman refuses to wait for Caesarean section.

DISCUSSION

(Abstract)

Dr. Van Hoosen (Chicago) described a case of myomectomy complicating a pregnancy of five days. She, of course, was not conscious that the patient was five days pregnant when she did a myomectomy removing five large fibroids, one of them as large as a grape fruit, all of them interstitial. The patient had been sterile for six years and when she came back after the operation, at the end of three months, the uterus was very large. Two hundred and seventy-five days after the operation she gave birth to a full term strong male child.

Dr. Murphy (Dixon) observed in the last year two cases of fibroid uterus in two pregnant women. One patient was about five months pregnant and had a fibroid about the size of a good-sized grapefruit obstructing the birth canal, and another pedunculated form right at the top of the fundus. Finding that the patient had a double mitral lesion he advised a conservative course. When she entered labor, the tumor was still obstructing the birth canal below. He did a Caesarean section and removed five fibroids following the section, and with a living baby and an uneventful recovery of the mother.

In another case there was only one single fibroid, about the size of a small lemon in the fundus of the uterus. He advised the patient that surgical interference was not indicated as the fibroid in no way interfered with the birth canal; but the possibility of a rupture of the uterus during labor should be considered. For that reason, the patient should go to a hospital and put herself in the hands of a competent obstetrician. She was delivered a week ago, a normal labor without any trouble.

Another woman, married four years, had large multiple fibroid of the uterus, one about the size of a large grapefruit, submucous, involving the entire right cornea of the uterus, and many other small ones, varying from that of walnut to a small lemon size. There were eleven all told.

In dealing with this surgically he was obliged to excise the right cornea of the uterus, and all the others were interstitial and were easy to excise. He did a myomectomy and closed the uterus.

Four years afterwards she returned from Portland, Oregon, and she was about four months pregnant. About the last month of her pregnancy, she developed severe puerperal toxemia, the urine was loaded with acetone and diacetic acid. He treated her in the hospital about three weeks before delivery. She had a normal birth canal, the child was low in the birth canal. He did a Caesarian section under local anesthesia, found the musculature of the uterus had separated for the entire length of the incision to the extent of about 5 C. C., and all that was containing that child within the uterus was the serosa and the mucosa or endometrium. There was no evidence of infection. That woman today has a living boy four years old and she is very grateful that she had a myomectomy and Caesarian section.

Dr. Heineick (Chicago) closing discussion; In these cases the induction of abortion is an illogical operation. It puts an end to gestation and does not protect the woman from the complications and perils incident to uterine fibroids. A myomectomy, as the doctor has said, has been successfully done. In our series there were a hundred and seventeen cases in which myomectomy had been performed during gestation, and eighty-five of those cases gave birth to a living child, gave birth through the natural channels to a living child, showing that the scar of a myomectomy can almost invariably stand the trauma of delivery.

It has been debated as to whether it is advisable

to supplement a myomectomy with a Caesarian section, but as the doctor and many others have done it successfully, it is apparently all right. What astonished me in collecting these cases was the low mortality of myomectomy in fibroids complicating pregnancy and also the low maternal mortality of Caesarian section—also the low fetal mortality of Caesarian section in myomatus uteri.

THE INTERPRETATION OF EARLY ABDOMINAL SYMPTOMS*

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In preparing the material for this paper, the entire literature for the past five years and some of the earlier articles were gone over carefully, and in that period, while much has been written on the symptomatology and differential diagnosis of the various pathological conditions which may exist in the abdomen, practically nothing has been written on the very early symptoms of disease, the first signs that something is going wrong in that region. Most of the symptoms described, and these are numerous, are all those of the fulminating stage of a disease, the stage in which the pathological condition is fully developed and often hopeless from a remedial standpoint. This stage of abdominal pathology has been gone over so thoroughly and discussed in such detail that further consideration of it here is superfluous. What we need now is a careful, detail investigation of the very early beginnings of a pathological condition, and a recognition of these signs early enough to make operation safe, completely curative, one might almost say, prophylactic.

There is an especial need for this early diagnosis in malignant disease of the abdomen, or in those conditions which are themselves easily operable, but which often lead to later malignancy. Of these, probably the most striking example is the gastric or duodenal ulcer, which in so many cases, according to W. J. Mayo, 54 per cent. is the apparent cause or forerunner of carcinoma.

Taking these up in detail, there are diseases of:

Stomach and Duodenum. Of the conditions affecting these organs, the most important from the standpoint of remedial or preventive surgery, are the chronic peptic ulcers and carcinoma.

Liver and Gall-bladder. Here the most important condition is that of cholelithiasis, with also its frequently accompanying or preceding condition, cholecystitis. Of less frequent occurrence as a primary and, therefore operable condition, but still important, are the various types of carcinoma of the gall-bladder and bile ducts.

Pancreas. Many of the affections of the pancreas are, of course, obscure to us, both as to their etiology and symptomatology. We do know, however, the relatively frequent association of chronic pancreatitis with cholelithiasis, also its probably frequent occurrence as a forerunner of diabetes. Carcinoma is another affection the beginnings of which are rarely recognized.

Appendix. About acute appendicitis, there is little to add. As to chronic appendicitis, however, earlier knowledge may still be desirable.

Large Intestine. Malignant new-growths, in particular carcinoma, are here of slow growth and, therefore, localized for a long time. They are, in consequence, well-adapted to surgical treatment. Diverticula and tubercular neoplasm should also be considered.

Stomach and Duodenum. Of the diseases of the stomach and duodenum which are most important from a surgical viewpoint, that is, which in the early stage are most amenable to surgical treatment and yet which, if neglected, may go on to the most dangerous and often inoperable of conditions, are the peptic ulcers, which, in so many cases, are the bases for future malignancy.

The similarity of symptoms which occur in many stomach disorders, both functional and organic, and which as often mean only errors in diet, habit, etc., as serious trouble—this similarity leads to considerable confusion in the diagnosis and, therefore, to perfectly reasonable doubt in the mind of the practitioner, as to whether or not the case should be operated on and the patient put to perhaps unnecessary risk and discomfort. It is, of course, also true that all these conditions such as ulcer and carcinoma are due to causes which are, as yet, imperfectly understood, and which may be merely the long continuance of certain bad habits. Therefore, in all of these cases, the first symptoms would be identical with those of the purely functional affections. With an early recognition of these disturbances of secretion, motility, vaso-motor supply, etc., and the organic lesions which they

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most often precede, much could be done to prevent the onset of future trouble.

Many cases of so-called hyperchlorhydria, chronic dyspepsia, indigestion, etc., are, in reality, as is proven by later developments, only the onset of gastric or duodenal ulcer, gall-stones or carcinoma. A definite attempt should be made in every case of chronic indigestion, to correct any possible errors in diet, habit, etc., to eliminate hysteria, lues, referred pains, etc. If, after this pain, nausea or even minor symptoms of indigestion persist, ulcer, gall-stones or other organic lesion should be suspected. An exploratory operation, usually, is done with comparatively little risk to the patient and, therefore, is much better than too long delay, with the strong probability of letting the condition pass beyond human control.

According to the literature reviewed, the earliest recognized symptoms of peptic ulcer are about as follows:

Chronic derangement of gastric and duodenal functions, including either increased or decreased free Hcl, hypermotility, with pain coming on some time after meals, after food has been partly digested.

Pain which is relieved by the taking of small amounts of food, by vomiting or by alkalies.

Burning or gnawing sensation coming on some time after meals—a bitter taste in the mouth and often belching of gas or of food, the latter usually having a bitter or "sour" taste. Often this belching entirely relieves the pain and occasionally induces the patient, unconsciously, of course, to form the habit of "air-sucking." These patients nearly always, by the time they consult a physician, have learned from personal experience, what will relieve them, and many of them carry crackers about with them, or soda, or get in the habit of eating frequently or even inducing vomiting, because they know it would give immediate relief. Sir Berkeley Moynihan suggests that the so-called "hunger pains" are, in reality, often the pains from duodenal ulcer, which come on several hours after a meal and at about the time when a normal person is beginning to get hungry.

As opposed to the early loss of appetite in gastric carcinoma, in ulcer, the appetite is usually good. These symptoms of ulcer are usually intermittent, the patient having long periods of

relief, and if diet or other measures have been resorted to, during this period, he often attributes his relief to this treatment.

Many physicians hesitate to diagnose ulcer without vomiting, hemorrhage, or occult blood in the stomach-contents, while as a matter of fact, a chronic ulcer, especially of the duodenum, may exist for years without visible hemorrhage or even without symptoms severe enough to send a patient to the physician, unless he goes merely for temporary correction of what he terms indigestion. In case a chronic peptic ulcer has gone on undiagnosed and possibly untreated for years and finally leads to perforation, the diagnosis and treatment are often, even then, delayed until definite symptoms of peritonitis have set in. Distension, fluid in the abdomen, collapse are all terminal symptoms and often mean that operation is too late. A history of old indigestion, together with pain and rigidity of the muscle-wall are sufficient evidence for a diagnosis of perforation and operation. In most cases, a very careful history, a study of all the physical signs, not merely those of the organ under consideration, especially if these can be combined with a thorough examination of all urine, blood, gastric contents, etc., should be sufficient for a certain diagnosis.

Next, the condition, which we now believe, is often a result or possibly an advanced or terminal stage of peptic ulcer—the gastric or duodenal carcinoma. Here, as in the case of other chronic abdominal conditions, much has been written and taught about the advanced and terminal symptomatology, while little has been said about the beginning symptoms and the advisability of operation, not merely before metastases have developed, but if possible, before the primary growth has become so far advanced as to cause hemorrhage and other severe symptoms. If all gastric carcinomas could come to operation while still localized, who knows how low the mortality might be brought, and with this, the willingness of patients to recognize their condition and to submit to early operation, as contrasted with the present fear of such operation, engendered in the minds of the laity by their knowledge of the very high death-rate, as well as high percentage of comparatively useless operations. Most of the patients whom the public knows as having been operated on for carcinoma of the stomach

die anyway from the same malady within a few months or a year. With an early recognition on the part of the physician and an education of the public to come early to him with all chronic stomach-disorders, much may be done to alleviate the results of gastric carcinoma and possibly to prevent it.

In gastric carcinoma, pain is usually an earlier symptom than vomiting, because vomiting often does not come on, until there is more or less obstruction, this, of course, meaning that the growth is already far-advanced. Several writers state that in the ordinary course of carcinoma, the symptoms commence with loss of appetite and want of vigor, often coming on rather suddenly in an otherwise healthy individual, and often without any apparent cause. Loss of weight begins early, also discomfort after taking food—which later becomes definite pain and nausea and still later, vomiting, at first of food alone, later with blood or coffee-ground vomit. Usually there is constipation. Tumor-mass is one of the latest developments and operation should never be held off for its appearance. Anemia, edema of the limbs and ascites are terminal symptoms.

The pain of carcinoma is variable and may be difficult to distinguish from the pain of ulcer or gall-stones. Often there is no actual pain, but practically always there is a feeling of discomfort and fullness after meals. The absence of free Hcl and the presence of lactic acid speak for carcinoma, but their absence is not, necessarily, a certainly negative sign, especially since these are signs usually of stasis, and may occur in other cases, while on the other hand, there may be no stasis in actual cases of gastric carcinoma. Whenever a patient at or after middle age, complains of indefinite gastric uneasiness, pain, vomiting or any of these, together with loss of flesh and strength and progressive anemia, a diagnosis of carcinoma is at least to be suspected and an exploratory operation should be done as soon as possible.

Carcinoma of the stomach and its symptoms depends also on the location of the growth—whether pyloric or in the body of the stomach. In the pyloric, symptoms occur much earlier than in the other form, consequently the disease permits of earlier recognition, diagnosis and treatment. In the pyloric form, the symptoms are obstructive from the beginning and conse-

quently vomiting begins very early. In the other form, or pre-pyloric, the symptoms are much more vague, but there is an early loss of appetite and interest in life—anemia progresses rapidly and loss of weight is soon seen. Occasionally hemorrhage or hematemesis is the first symptom. If there is a history of a previous gastric ulcer or even a history of symptoms which seem to point to ulcer, if in such a person about middle-life or beyond, there develops a loss of appetite, with a real distaste for food, especially meat, uneasiness after meals, together with anemia and loss of weight and often belching—a tentative diagnosis of carcinoma is allowable and an exploratory operation advisable. With our present knowledge of carcinoma, there are no symptoms or signs to which we can point as the definite dividing line between ulcer and carcinoma.

The chief purpose, of course, in the plea for recognition and invariable operation for peptic ulcer, is the fact that so many are followed or result in malignancy, and the idea that if operation is performed in all these cases, a large percentage of carcinomas of the stomach will be, not only cured, but prevented.

Gall-bladder. Here we have an ample field for the development of studies of early symptoms. To take for example the condition of cholelithiasis, many texts and writers suggest that gall-stones may exist for years without symptoms. This may be true in so far that the symptoms are not ascribed to the gall-bladder or are so mild as hardly to be called symptoms at all, but which are, nevertheless, always present in some degree, whether recognized or not. Gall-stones often begin with a sense of uneasiness in the epigastrium or over the lower ribs on the right side. Cutaneous or muscular hyperalgesia in the region of the pain and also in the upper portion of the right rectus muscle is sometimes found. There may be some contraction of the right rectus. Pain may be very mild, may extend to the back, or down the right arm or it may occur only in the back, be called by the patient a "backache" and be attributed to some co-existent pelvic disorder. Occasionally there is pain in the shoulder and arm which is treated for years as a neuritis. Often the patient ascribes it to "rheumatism." Persistent dyspepsia and heart-burn are frequent and very early signs of gall-stones. Vague uneasiness after meals, often pains in the epigas-

trium, not always related to meals are significant. Jaundice, tumor-mass and colic are very late symptoms. There may be obscure indigestion with intermittent temperature—definite attacks of chills and fever, lasting 1-3 days. This occurs when there is inflammation of the ducts, either associated with stones or in the case of a cholecystitis. There may or may not be slight jaundice. Even in the late literature, a statement is made that the most important symptoms of disease of the gall-bladder were pain, jaundice and tumor-mass. These, with the exception of the first, and even that, except in its mild form, are all symptoms of an advanced form of cholelithiasis. Pain is rarely very severe, until an attack of gall-stone colic occurs. Jaundice occurs in only a comparatively small percentage of cases, often stated as 25 per cent. and then only when the stones are large or impacted sufficiently to cause obstruction of a duct. Tumor-mass also occurs usually with extreme obstruction and is, consequently, not always present and when present is indicative of an advanced stage of the disease. These are not, in reality, merely the symptoms of stones. They indicate more than the simple condition of cholelithiasis. They mean also, and what is usually more important from the standpoint of immediate surgery, they mean the presence of complications of gall-stones.

The main thing, then, about the early symptomatology of gall-stones appears to be, first, the fact that such symptoms as are present are referred by the patient always to the stomach, not to the gall-bladder. The history as given by the patient is of the all-inclusive "stomach trouble," a feeling of fullness and uneasiness in the epigastrium, dependent often upon certain articles of diet, rather than upon the amount of food or its general character. The patient complains of heart-burn. Often there is very slight jaundice, which passes for a sallow skin and no particular attention is paid to it either by the patient or by others. Often, too, it is not noticeable at all in the skin and can be detected only in the sclera. One of the characteristics is a feeling of chilliness, and often a sharp pain on breathing deeply, occasionally described as a "catch" or "stitch" in the side. There may be nausea and sometimes vomiting. In the later stages there may be rigor and fever. There seems to be no doubt that in even the most "latent" cases of

cholelithiasis, there are always symptoms of a sort characteristic enough, if searched for, to enable one to make a fairly early and definite diagnosis.

Carcinoma of the gall-bladder. As in the case of peptic ulcer, which is so often followed by malignancy, so the condition of gall-stones, which may exist for years without serious discomfort and which may, therefore, pass undiagnosed and untreated, often leads to or, at least, is associated with the onset of carcinoma of the gall-bladder or of the bile-ducts. We are, of course, here excluding all of those cases of malignancy of the liver, gall-bladder and ducts which are secondary to carcinoma of other organs, as it is well-known that the liver and with it, of course, the gall-bladder, are favorite spots for the formation of metastases from malignant growths in various parts of the body. It is, however, the purpose here to deal with primary growths only, the whole idea in the plea for early operation in such cases being to do away with the possibilities of metastases.

Of the symptomatology of carcinoma of the bile-ducts, the first symptom is jaundice, beginning very slowly but steadily progressive. Then come the associated signs of clay-colored stools and bile in the urine. Loss of weight and strength begin early and are progressive.

Pancreas.—Concerning the affections of the pancreas to be discussed in this paper, the most important point seems to be the relationship between gall-stones and chronic pancreatitis, the question of their connection, whether due to one common cause or whether the infection of the pancreas is often secondary to that of the gall-bladder. The acute form of pancreatitis, especially the hemorrhagic, is always apparent as an acute condition, and while its differential diagnosis from other types of acute abdomen is often difficult, still it so urgently demands immediate operation, that an early diagnosis is not so often delayed as in the chronic form. Probably it is most often confused with intestinal obstruction. The acute suppurative form is usually somewhat less violent in onset and presents the picture of beginning suppuration anywhere combined with pain and tenderness in the epigastrium. There may be fatty diarrhea, glycosuria, etc., to aid the diagnosis, but in any event, the symptoms are always marked enough to indicate immediate

operation. Often they are preceded by a history of gall-stones.

Chronic pancreatitis, on the other hand, is more often undiagnosed. The probability is that, in the most of these cases associated with gall-stones, the symptoms of the latter condition are most marked and with stool and urine examinations, which may give most valuable aid in the way of detecting fat-necrosis products, a diagnosis of gall-stones with secondary pancreatitis can usually be readily made. Sugar may be present in the urine, even in the non-diabetic type. It is, of course, only a question as to whether many cases of diabetes follow a chronic pancreatitis with associated gall-stones or even previous attacks of catarrhal jaundice or cholecystitis, but it is possible that a fair percentage might be avoided by early free drainage of the bile-ducts.

In carcinoma of the pancreas, particularly of the head of the pancreas, the chief beginning symptoms are the insidious onset of jaundice, which may later become very deep, the slow pulse and intense itching common to all forms of jaundice, often a palpable gall-bladder and the general signs of malignancy anywhere in the body. The frequent absence of pain is noticeable.

Appendix.—The symptoms, even the very early ones, in this conditions are already well known. Pain is always the first, whether the condition be acute or chronic. This fact is already well established. In mild attacks, the pain may pass almost unnoticed or for simple indigestion, but a history can nearly always be obtained, especially after the patient has had several attacks—and it is always the first and most significant symptom. A history of one or more attacks of pain in the right side of the abdomen, followed by nausea, accompanied or not by constipation and usually with a slight tenderness on deep pressure over McBurney's point, are sufficient to establish a diagnosis of chronic or sub-acute appendicitis and there is, of course, but one indication—operation, the sooner the better, even in the quiescent stage. With temperature and leucocytosis, it should of course be immediate. Occasionally confusion arises in the diagnosis, which may be due to a very high appendix and may be mistaken for gall-bladder trouble, or sometimes, especially in women, from a very low appendix which may hang over the brim of the

pelvis and be mistaken for acute salpingitis or pelvic abscess. Even a bimanual examination in such a case may give tenderness in the adnexa or there may be a salpingitis secondary to the primary appendicitis.

Large Intestine.—Of the various diseases of the large intestine, in which early diagnosis is rarely made and in which it is most important, carcinoma is easily the foremost. Usually no diagnosis is made until obstruction begins to appear or until there is considerable hemorrhage or tumor-mass. These are all late symptoms and therefore of comparatively little value.

The various types of carcinoma give rise to different symptoms in the early stage. The scirrhus type causes early symptoms of obstruction with little hemorrhage or ulceration until very late in the disease. On the other hand, the medullary or soft type shows hemorrhage, ulceration and pain very early, while symptoms of obstruction are late. Both of these types, then, must be considered carefully in investigating the early symptomatology of carcinoma of the large intestine.

The very first symptom, probably, is slight irregularity in the action of the bowels, especially so in persons who have previously had no such trouble. While not marked, there is usually a slight constipation with occasionally a mild diarrhea, these conditions occurring without any apparent cause, such as errors in diet, acute infections, etc. There is occasional pain over a definite area of the abdomen and some authors describe a spasm or cramping pain occurring occasionally, lasting a short time and located always in the same spot. Borborygmus is very common and often occurs with these cramping pains, both being due, no doubt, to a spasmodic peristalsis or attempt to force fecal material past the point of beginning stenosis. Occult blood and mucus appear in the stools fairly early and the general symptoms of malignancy, loss of weight and secondary anemia, come on soon afterward. The general tendency seems to be to wait for blood in the stools, alternate diarrhea and constipation, acute attacks of intestinal obstruction or palpable tumor-mass before diagnosing a definite malignant new-growth and urging operation. Every one of these symptoms, when really apparent, are signs that the disease is not only fully developed but almost in the last stages.

It seems a criminal neglect of the opportunities and resources at one's hand not to investigate thoroughly every case of persistent bowel irregularity, which does not clear up on dietetic and other hygienic measures, especially when occurring in a person of the carcinoma age. Persistent trouble of this kind could, in at least 50 per cent of cases, mean nothing less than serious organic lesion of some kind and if so, could one but have the courage to insist on early operation, the risk would in most cases be materially lessened with the acceptance of early exploratory operation as compared with the risk of too long delay.

The early operation for malignancy of the large bowel is particularly desirable because of the anatomical structure of that part of the intestine, which permits easy removal of varying lengths of its substance, also because of the slow growth of neoplasms there. The majority of tumors of the large bowel are primary there, and therefore with early operation, removal of the growth is usually complete. Also tumors here extend slowly and form metastases only at a very late stage of their development, so that the probability of recurrence is at a minimum here.

Other conditions of the large bowel, such as tuberculous neoplasms and diverticulitis often give rise to considerable confusion, with a resulting late diagnosis. These conditions are, however, readily diagnosed with a little careful inquiry into the history and symptoms, especially with the aid of stool-analyses and x-ray examinations.

The conditions discussed here do not, of course, include all or even necessarily the most important of surgical diseases of the abdomen. There has been an attempt, however, to choose the more striking examples of conditions which seem to hold forth great possibilities and to offer the greatest fields for investigation. It is believed that careful inquiry into the history of every patient, especially those who come to operation, with a subsequent comparison of *this* history with the pathological conditions found and probably a *second* going into the early symptoms would confirm many of the theories set forth but not accepted for lack of corroborative findings. It might give an entirely new viewpoint on many of the diseases, the early symptoms of which we

now know little. At the very least, it would aid greatly in future early diagnosis and so would be infinitely worth while.

SUMMARY

As a summary, then, of the data obtained from a review of the literature, we find that comparatively little has been done or at least published along the lines of the beginning symptomatology of pathological conditions of the abdomen, that the great majority of the symptoms described, while undoubtedly accurate, are nevertheless symptoms of an advanced, sometimes even the terminal stage of a disease. It is also found that many of the earliest signs of abdominal pathology are of the type so commonly known among the laity as indigestions, dyspepsia, etc., and as such are paid but scant attention, a few bottles of patent medicine or sometimes a prescription from the doctor being considered all that is necessary in such cases. These are exactly the conditions that would best repay careful study, practically every one of these cases being, in reality, some form of organic lesion.

The object of this paper, while necessarily very incomplete as to accuracy of data, is to recount, so far as possible, what has been done, to suggest what needs to be done, and the lines along which investigation might be carried on most profitably. Especially is it desired to emphasize the urgent need for the early recognition of those diseases which are amenable to surgical treatment and which may be completely remedied thereby, provided treatment is undertaken early. Above all is it important, by means of this early recognition and prompt treatment of the relatively benign conditions—to prevent the development of those infinitely more hopeless conditions which so often follow upon their trail.

If, for example, the mortality of carcinoma of the abdominal organs could be lowered, especially if even the onset could be, in many cases, prevented, no amount of painstaking research and careful investigation, but would be repaid a thousandfold, and surgery would be offering then what the highest ideals of its practice indicate—not merely alleviation of suffering for a time or a doubtful prolongation of existence, but a complete and lasting cure.

INDEX MEDICUS. 1915.

Deaver: Significance of upper abdom. symptoms. *Charlottesville, N. C. M. J.*, 1915, LXXII, 169-74.

Duffy: Diag. of ruptured gastric ulcer & carcinoma of uterus. *Inter. J. Surg.*, N. Y., 1915, XXVIII, 341-5.

Elder: Acute abdom. Clin. Study. *Canad. M. Ass. J.* Toronto, 1915, V, 85-92.

Harsba: Aids to diag. of abdom. dis. *Lancet-Clinic*, Cincin., 1915, CXIV, 117-21.

Hayner: Considerations in diag. of intro-abdom. Conditions. *West. Med. Rev.*, 1915, XX, 500-3.

Rundlett: Some practical considerations in diag. of abdom. cond. *Jour. Lancet*, Minneap., 1915, n. s. XXXV, 399-404.

Tyler: X-ray as an aid to diag. of R. U. Q. dis. *Med-Herald*, St. Joseph, 1914, n. s. XXXIII, 450-55.

Crohn: New-growths involving bile & pancreatic ducts, their early recognition by means of duodenal content analyses. *Am. J. Sc. Phil.*, 1914, CXLVIII, 839-56.

Deaver: Abdom. pain, its significance & diag. value. *Boston M. & S. J.*, 1914, CLXXI, 973-5.

Armstrong: Typhoid perf. *Surg. Gyn. & Ob.*, 1914, XIX, 342-5.

Caird: Perf. Gastric Ulcer. *Edinb. M. J.*, 1914, XIII, 455-69.

Deaver: Gastric ulcer. *Long Isl. M. J.*, 1914, VIII, 441-7.

Wilkie: Acute App. *Brit. M. J.*, 1914, II, 959-62.

Erdmann: Biliary Surg. *Am. J. Ob.*, N. Y., 1914, LXX, 815-25.

Riesman: Diag. & trt. of cholecystitis. *Therap. Gaz.*, Detroit, 1914, XXX, 773-8.

Morley: Some cond. that simulate chr. app. *Lancet*, Lond., 1915, I, 62-4.

Murphy: Talk on app. *Surg. Clin. Chi.*, 1915, III, 1097-1102.

Shaw: Ass. of various abd. lesions w. chr. app. *Med. J. Aus.*, 1914, I, 512-6.

Smythe: Date obtained as to app. *Charlotte, N. C., M. J.*, 1915, LXXI, 12-18.

Murphy: Recurrent cholecystitis. *Surg. Clin. Chi.*, 1914, III, 1103-1111.

Deaver: Chr. pancreatitis. *Tr. Ann. Surg. Ass., Phil.*, 1914, XXXII, 322-8.

Smitbies: Sympt. & Signs of gastric carcinoma. 712 cases. *J. A. M. A., Chi.*, 1915, LXIV, 643-5.

Owen: App. Plea for immediate operation. *Bristol*, 1914, J. Wright & Sons, 226 p.

Lichty: App. as seen by the internist. *Penn. M. J., Athens*, 1914-15, XVIII, 280-5.

— ten Horn: Zur Diag. der App. *Berl. klin. Wchnschr.*, 1914, LI, 1962.

Torrance: Early diag. & oper. for gall stones. *N. Y. M. J.*, 1915, CI, 150.

Smitbies: On diag. & prog. in gastric ulcer. *Interstate M. J.*, 1915, XXII, 207-19.

Harmon: A plea for early diag. & trt. of perf. intest. in typhoid. *J. S. Car. M. Ass.*, 1915, XI, 44-8.

McKinnon: Acute surg. cond. of stom. & duod. *Moyrihan: Intest. stasis. Surg. Gyn. & Ob., Chi.*, 1915, XX, 154-8.

McRae: Acute Surg. Abdom. *South M. J.*, 1915, VIII, 293-5.

Peck: Gastr. & duod. ulcer. 120 cases. *Ann. Surg. Phil.*, 1915, LXI, 406-13.

Savini: Contrib. to study of chr. app. *Med. Rec. N. Y.*, 1915, LXXXVII, 557-60.

Stanton: Sequence of path. changes in acute app. *Am. J. M. Sc., Phil.*, 1915, CXLIX, 524-35.

Lippman: Diag. of gastro-intest. dis. *Cal. State J. M.*, 1915, XIII, 174-9.

Tinker: What stom. symptoms justify surg. interference? *N. Y. M. J.*, 1915, CI, 1083.

INDEX MEDICUS. 1917.

Deaver: Differt. of abdominal pain & its bearing on treatment. *Tber. Gaz.*, Detroit, 1917, 3. s. XXXIII, 244-9.

Harbin: Review of 200 oper. for acute abd. *J. M. A. Ga.*, 1917-8, VII, 67-74.

Hewitt: Value of leuc. count in diag. of acute abd. *Ann. Surg.*, of Phil., 1917, LXVI, 143-51.

Hughes: Diff. Diag. of acute abd. *Guy's Hosp. Gaz.*, Lond., 1917, XXXI, 294, 300.

Ives: Abd. pain, its diff. diag. *Arch. Diag. N. Y.*, 1917, X, 286.

Davis: Value of pain, jaundice, & tumor-mass in diag. of diseases of R. U. Q. of abd. *Am. Jour. of Ob.*, N. Y., 1917, LXXV, 124-35.

Ehferd: D. D. of lesions in R. U. Q. *J. Flor. M. Ass.*, 1916, III, 117.

Roosen: D. D. of surg. cond. of upper abd. *South. Med. Jour.*, Birmingham, 1917, X, 421-3.

Weinstein: Border-line cases of upper abd. *N. Y. M. J.*, 1917, CV, 18-20.

Deaver: Cbr. App. simulating duod. ulcer. *International Jour. Surg.*, N. Y., 1916, XXIX, 377-82.

Wunderlich: Persistent pain in L. I. Q. following appendectomy, *Long Island M. J.*, 1916, X, 556.

Abbott: Early diag. of intussusception in children under three years of age. *Tr. West. Surg. Ass.*, 1915, Minneap., 1916, 299.

Murphy: D. D. of certain abd. tumors. *Surg. Clin. Phil.*, 1916, V, 1119-24.

Sturmdorf: Clin. & lab. manifestations of malignancy. *Arch. Diag.*, N. Y., 1916, IX, 392-12.

Thacher: Question of operation for susp. perf. in typhoid fever. *Med. Rec.*, N. Y., 1917, XCI, 311-13.

Walker: Ileus, clin. & exp. *Detroit M. J.*, 1917, XVIII, 43-8.

Coffey: Gastric & duod. ulcer. *Surg., Gyn. & Ob., Chi.*, 1917, XXIV, Suppl. 217-44.

—Chr. gastric & duod. ulcer. *Ibid.* 350-5.

Graham: Surg. Aspects of gastric & intest. stasis. *N. Y. M. J.*, 1917, CV, 490-7.

Connell: Chr. App. *Wis. M. J.*, 1916-7, XV, 309-16.

Levy: Chr. App. *N. Y. M. J.*, 1917, CV, 449-51.

Verbrycke: Chr. App. Mistakes. *Med. Rec. N. Y.*, 1917, XCI, 455-7.

Bevan: Gall-stone Disease. *Surg. Clin. Chi., Phil.*, 1917, I, 1-20.

Kennedy: The "latent" period in acute perf. of stom. & duod. *Lancet*, Lond., 1917, I, 410-12.

Peck: Cancer of the stom. *Surg., Gyn. & Ob., Chi.*, 1917, XXIV, 549-52.

Fowler: Gall-bladder Disease. *Am. J. M. Sc., Phil.*, 1917, CLIII, 497-508.

Lamson: Some facts concerning gall-bladder disease. *Northwest. Med.*, Seattle, 1917, XVI, 108-12.

Deaver: Diff. of abd. pain. *Bull. Med. & Clin. Fac.*, Maryland, Balt., 1917, IX, 147-54.

Tausin: Cbr. Intest. Stasis. *Internat. J. Surg.*, N. Y., 1917, XXX, 111-3.

Cook: Hematemesis & its rel. to chr. app. *Interstate M. J.*, St. Louis, 1917, XXIV, 341.

Goodwyn: Chr. App. in its rel. to dyspepsia. *Bristol M. Clin. J.*, 1917, XXXV, 18-21.

T.: Diag. of app. *Guy's Hosp. Gaz.*, Lond., 1917, XXXI, 156-9.

Blabd: Dis. of gall-bladder & biliary tracts. *N. Y. M. J.*, 1917, CV, 1033.

Kern: Plea for early diag. of gall-bladder dis. *J. Iowa State M. Soc.*, 1917, VII, 103-6.

McPhredan: Diag. of tumors in upper zone of abd. *Canad. M. Ass. J.*, Toronto, 1917, VII, 393-8.

Hunter: Pancreatico-biliary syndrome. *Pan-Amer. S. & M. J.*, N. Orl., 1917, XXII, 21-23.

Lewson: Plea for early diag. & trt. of Acute App. *N. Y. M. J.*, 1917, CV., 1236-38.

Ulman: Gall-bladder Dis. *Med. Rec.*, N. Y., 1917, XCI, 985-7.

Behrend: Significance of Abd. Pain. *Med. Rec.*, N. Y., 1917, XCII, 188-9.

Balfour: Surg. Sig. of gastric hemorrhage. *J. A. M. A., Chi.*, 1917, LXIX, 465.

Tbewlis: The treacherous calm of app. *Med. Council*, Phil., 1917, XXII, 37.

Simmons: Intest. Obstruct. Diag. & Trt. *J. Flor. M. Ass.*, 1916. III. 264-9.

INDEX MEDICUS. 1918.

Kennedy: Latent period in acute perf. of the stom. or duod. Tr. Roy. Acad. M. Ireland, Duhal., 1917, XXXV, 55-62.

Wight: Perf. pyloric ulcer. Long Isl. M. J., 1917, XI, 434.

McKenna: Early recog. & trt. of acute app. Surg. Clin., Chi., 1917, I, 1069-75.

Apfel: Intussusception—its early recognition. Arch. Ped., N. Y., 1917, XXXIV, 781-5.

Langer: Ileus. Ill. M. J., Chi., 1917, XXXII, 317.

Vincent: Malignancy of the hiliary app. Med. Rec., N. Y., 1917, XCII, 933-6.

Gant: Surg. constipation & diarrhea. Va. M. Semi-monthly, 1917, XXII, 417-22.

Richards: Observations on a series of g. & d. ulcers—two and one-half years. Northwest. Med., Seattle, 1917, XVI, 368-70.

Vaughan: Diag. & trt. of gall-stones. Am. J. Oh., N. Y., 1917, LXXVI, 982-6.

Hartshorn: Surg. sig. of abdom. pain in children. Med. Rec., N. Y., 1918, XCIII, 96-99.

Hughes: D. D. of acute abdom. Clin. J. Lond., 1917, XLVI, 278-83.

Deaver: Peptic ulcer. - N. Y. State M. J., 1917, XVII, 529-35.

Troell: On gas. duod. ulcers from a surg. point of view. Ann. Surg. Phil., 1917, LXVI, 664-71.

Speed: R. U. Q. App. Surg. Clin., Chi., 1917, I, 1319-25.

INDEX MEDICUS. 1919. (Jan.-June).

Malignant Diseases of Upper Abdomen. Internat. Clin. Phil., 1918, 28, s. III, 117.

Erdmann: Chr. Appendicitis. Internat. Clin. Phil., 1918, s. III, 113-5.

MacKechzie: Chr. Cholecystitis. Internat. Clin. Phil., 1918, 28, s. III, 137-40.

Herzog: Diag. of chronic peritonitis. Deut. med. Wchnsch. Leipz. & Berl., 1918, XLIV, 689.

Ahn: Diag. of Pancreatitis. Berl. Klin. Wchnsch., 1918, LV, 307.

Basch: Diff. Diag. between chronic gastric ulcer & carcinoma of stomach. N. Y. State J. M., 1918, XVIII, 427-33.

Eisendrath: Clin. Lect. on the acute abdomen. Surg. Clin. Chi. Phil., 1918, II, 933-75.

Munck: Acute Supp. Pancreatitis. Biblioth. f. Laeger. Kohnh., 1918, CX, 626-31.

Bottomley: Some phases of the Surg. of stom. & duod. Boston M. & S. J., 1918, CLXXIX, 719-728.

Hertz: 60 cases of perforated gastric & duod. ulcer. Ugeskr. f. Laeger. Koehrh., 1918, LXXX, 1801-31.

Mix: Gastric carcinoma. Surg. Clinics. Chi. Phil., 1918, II, 977-87.

Drachter: Diag. of App. in children. Munchen Med. Wchnsch., 1918, LXV, 1943.

Lanz: Pseudo-App.-Nederl. Tijdschr. v. Geneesk. Amst., 1918, II, 1616.

Hipsley: Resume of 57 cases of intussusception. Med. J. Australia, 1918, II, 383-6.

O'Connor: Intest. Obstruct. & App. Brit. M. J., Lond., 1918, II, 573.

Whipple: Hist. anal. applied to surg. dis. of the hiliary tract & pancreas. Ann. Surg. Phil., 1918, LXVIII, 471-84.

Hale & Adams: Illustrative cases of a typical acute abd. cond. U. S. Nav. Med. Bull., Wash., 1919, XIII, 95-8.

Roberts: Proper role of surg. in digestive disturbances. Am. P. E. Rev., 1919, XXIV, 160-4.

Chaufard: App.-Cholecystite. Rev. gen. de clin. & de therap. Par., 1918, XXXII, 263.

Morris: 2 most important signs in chr. app. Med. Rec., N. Y., 1919, XCV, 55.

Kellogg: Diag. & treat. of duod. obstruction. Surg. Gyn. & Oh. Chi., 1919, XXVIII, 174-82.

Rowlands: Intest. Obstruction. Guy's Hosp. Gaz., 1918, XXXII, 184.

Neff: Surg. of gall-bladder & hiliary tract. Surg. Gyn. & Oh., 1919, XXVIII, Internat. Abstr. Surg., 1-33.

Kahn: Borderline Gastric Diseases. N. Y. M. J., 1919, CIX, 105-9.

Jungblut: Sig. of abdominal pain. J. Iowa State M. Soc., 1919, IX, 38-46.

Smithies: Pain in the L. L. Q. Quart. Med. Clin., St. Louis, 1919, I, 7-12.

—: Accurate diag. in appendicitis. Lancet, Lond., 1919, I, 114.

McKenna: Immediate surg. management of acute app. in mil. hosp. Surg. Gyn. & Oh., 1919, XXVIII, 303-8.

Behrend: Variability of the path. & sympt. of chr. intest. obstruct. Ann. Surg. Phil., 1919, LXIX, 21-4.

Kellogg: Chr. duod. obstruct. Med. Rec. N. Y., 1919, XCV, 216.

Erdmann: Gall-bladder disease & its diff. diag. Am. J. of Oh., 1918, LXXVIII, 752-7.

DISCUSSION

DR. HARGER: What Dr. Moore has said to us impresses upon my mind this, that I have tried to impress upon the minds of the students so many, many times, and that is the importance of getting a detailed history of every case and getting at the symptoms from their early onset, and making a positive, or as nearly as possible a positive diagnosis and as early as possible.

With the present day situation, we have in addition to a careful history and a careful clinical examination the laboratory, the x-ray, the blood test, and it seems to me we are not justified in turning a patient away without making a diagnosis. If by all those means a positive diagnosis is not made, then exploratory laparotomy is indicated.

Recently they have come forward with a new procedure which I believe will prove to be a fad, and that is the injecting into the peritoneal cavity of gas to distend it and thereby get a better x-ray picture. I don't think it is justified. I am satisfied that if I had anything wrong with my peritoneal cavity I would rather have the fellow make a little button-hole and look in than fill me up with gas to get a good x-ray picture.

As I said before, the detailed history and careful clinical examination as a rule is worth more to us than all other things.

Dr. Heineck (Chicago): I must say, too, that the early interpretation of symptoms is all important, because the early interpretation of symptoms implies timely operation and timely operation gives us the best results from the standpoint of recovery and also from the standpoint of mortality.

One of the conditions in which I think the early interpretation of symptoms is most important, though it is important in all diseases—but in this particular one it often saves us from performing a mutilating operation upon a patient—is ectopic pregnancy. As the expectancy of life in the ectopic fetus is practically nil, I believe that by early interpretation of the diagnostic signs and by the early diagnosis of ectopic pregnancy we can put an end to that gestation, put an early end to a condition which is always a menace to the mother.

Dr. Moore had nothing to say in closing.

TREATMENT OF NERVOUS IRRITABILITY AND EXCITEMENT*

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The present paper is the third of a series on the reduction of nervous irritability and excitement including the treatment of insomnia.¹ It seems well to restate some of the main features of these preceding papers, but from a different approach, so that new points may be inserted and a clearer idea of the technic gained.

These articles are addressed not alone to the specialist on nervous disorders but to the general practitioner and internist as well. For it seems to be admitted that there is a common need for a means of reducing nervousness in place of depressing drugs or in addition to them. For instance, in syphilis, duodenal ulcer, post-operative cases or other organic conditions, the physician may be at a loss to quiet the nervous system, although this may occasion the chief distress. It is coming to be recognized that treatment of an organic disorder does not necessarily do away with any accompanying nervousness. The effect may remain long after the cause has been removed, just as an eczema may persist when the original stimulus to the dermatitis has been removed. In this vein a noted French writer on the internal secretions observes: "Nervous and psychic symptoms born of a glandular disorder, which is often transitory, may outlast this disorder indefinitely."²

Experiments begun at Harvard University in 1908 indirectly suggested the use of relaxation for bringing quiet to the nervous system and the present method was gradually evolved. Hitherto relaxation has been almost universally known but has been very largely neglected. Every layman knows the value of relaxation and knows that the nervous individual does not or cannot relax. Text-books on nervous disorders commonly make little or no mention of the term relaxation, even those dealing with the Weir Mitchell rest-cure. A few writers have written on relaxation in the sense of recreation, which

is not the present meaning. A few works seem to me excellent, such as those of McCall and Maloney, and because of the universality of relaxation doubtless other such instances may be found even in previous decades. In a crude form, relaxation has been known to every physician, and therefore I do not doubt that if any one had read a paper on relaxation in some medical society of the ancient Greeks, someone would have arisen to say that he had made use of the method; for the function is, of course, as old as nature. However, previous efforts have on the whole proved futile, and have received little notice, apparently because they failed to go far enough to develop an adequate method. For clinical use a more developed form of relaxation needs to be used than has hitherto been conceived. The need of present day physicians is for a method of general application which can replace either bromides or the rest-cure, or be used along with either measure.

When the nervous patient relaxes very well according to previous manners, he is nevertheless not relaxed according to present standards. There remains over a tenseness which can be externally discovered by clinical signs, and which is called *residual tension*. This reveals itself in tremor or in tenseness or in excessive or restless movements of the whole body or limbs, but is frequently limited to a slight manifestation of some small and apparently insignificant part such as the occasional restless movement of a finger or undue winking of an eyelid. The present method differs from previous ones in that it overcomes residual tension. It requires the physician to make continual fine observations in order to direct the patient to do away with the "inward excitement."

The patient is shown how to relax the various muscle groups of his body, beginning as a rule with the biceps-brachial of the right or left arm. The part is made tense so as to enable him to note the feeling before it is relaxed. Many minutes, perhaps fifteen, are required for the beginner and usually also for the advanced patient to relax a particular muscle group; and during this time he must relax or try to relax further and further each minute. He does not concentrate in order to relax but makes no effort at all. The method is called progressive relaxation because the patient increases the relaxation from moment

1. The first appeared in the *New York Medical Journal*, March 6, 1920, and the second was read at the New Orleans meeting of the American Medical Association.

2. Laignel-Lavastine, *The Internal Secretions and the Nervous System*, Nervous and Mental Monograph Series, 1919, 6.

*Read at the 70th Annual Meeting of the Illinois State Medical Society, at Rockford, May 19, 1920.

to moment, because he learns to relax his muscle groups serially until he is able to relax them all simultaneously, and because he advances to a stage of the nervous system where quiet is automatically maintained from day to day.

Three types of relaxation are to be acquired by the patient. *General relaxation* comes first; in which he lies upon a couch and learns to relax the principal muscle groups of the body at the same time. In this way mental and emotional quiet may be secured. The next step is *relative relaxation*. The purpose here is to show the patient how to be about his affairs, his business or his social matters without being nervous. It depends upon the principle often used in art that the active individual will not be nervous provided only those parts of his body are in use as are needed and appropriate for the activity. In acquiring this condition of repose during activity the patient sits up and is shown how to relax those parts of the body not needed for maintaining posture, particularly the small muscles of the face and eyes, lips and tongue and back of the neck. Next he opens his eyes but relaxes away any undue tenseness. Then he engages in conversation with the physician while the latter brings to notice the mark of any undue muscular activity. A third type of relaxation which has not been mentioned in previous papers may be called *selective relaxation*. The patient often reports that certain circumstances "make him nervous," while other irritations have no like effect upon him even though they might be expected to excite him much more. In this event, if the irritation can not be removed, the patient may be taught to relax toward the source of irritation. To this end few new instructions are needed after he has learned general and relative relaxation. Whenever the circumstance arises which above other things previously has irritated him, he simply is to relax those parts that tend to become tense. If necessary, he may lie down upon a couch to do so, but the simpler way is to remain seated or up and about his affairs while relaxing away the irritation or excitement. In this manner a patient may learn to be relaxed in the presence of noises or scenes that have previously irritated him or towards some personal affliction that has previously caused him uneasiness or in the presence of some individual who

has heretofore been a source of nervous disturbance.

By close observation of the behavior of the patient the physician obtains clinical symptoms and signs of overactivity of the central nervous system or of the autonomic apparatus. The technic of the method consists, then, of these observations together with the instructions given to the patient. In this paper these instructions may now be exemplified. It will be seen that while the present method is simple in principle, many details must be observed if it is to be carried out in a far-reaching and effective way.

Let us proceed to an intimate illustration of one form of the present technic.

The patient, a stout man of about 46, was under general treatment for asthma apparently of cardiac origin. He had chronic bronchitis and had had several attacks of broncho-pneumonia. The X-ray showed a dilated aorta and an increased transverse diameter of the heart, especially on the right. Spells of dyspnea often came on toward evening and might keep him up all night long, unless relieved by a hypodermic injection of some form of digitalis or by marked doses of caffeine.

His wife requested that he be treated for nervousness, believing that this played an important part in making these spells severe. When seen at about 10 p. m. during one such spell, he appeared pale, perspiring, dyspneic, with marked rhonchi, an anxious expression, and the eyes seemed "toxic." The aim of nervous treatment will be to point out to the patient the voluntary element in these symptoms and guide him to rid himself of them. He was directed to go to bed and lie down while the physician sat close by. He fidgeted, breathed violently, cleared his throat often and complained of substernal distress. His co-operation and insight were secured by calling his attention to his restlessness, to frequent movements of the limbs and to the immoderate movements of his chest; it was brought to his attention that the aim must be to bring quiet and ease to these parts. Now upon direction he closed his eyes and flexed his left forearm, while the physician offered passive resistance. He was asked, "Do you note the activity here?" while the physician pointed to the biceps. (When a patient fails at first attempt to recognize the feeling of tenseness in a part, contraction is repeated with passive resistance, until he reports success.) Next the instruction was given, "Now let your left arm go until that part (the biceps group) is just as limp as a rag! Just do nothing with the arm! Let it go further and further every minute!" After a little while of quiet the patient was requested to extend the left forearm against resistance by the physician, noting the tenseness in the triceps group; then he relaxed both extensor and flexor groups for some minutes. Proceeding in this way the flexor and ex-

tensor groups, both right and left of the upper and forearm received practice; next we passed directly to the chest because it was heaving violently. He was directed to take an exceptionally long breath, noting the feeling of tenseness or activity spread over the chest-wall as he did so. Then he relaxed the chest so far as he was able. Later he was requested to cough several times, noting tenseness the while in the throat and tongue. In the same way he cleared the throat, noting tenseness. Then the instruction took the colloquial form, "Now let the tongue and throat relax! Do not bother to clear the throat! If there is a little distress, let it go! Do not bother to cough! Just let the breathing take care of itself! Make no exertion at all! Don't bother about anything at all!" In this manner the patient gradually abandoned his excessive efforts to clear his throat and to cough up secretions; the deep, rapid breathing, which was apparently in part a voluntary and excessive effort to obtain oxygen, gradually subsided; the anxious expression gave way to calm. He finally fell asleep for about ten minutes and appeared rested when he awoke. He rested well that night without bromides and even without cardiac stimulation. For economic reasons few further treatments were given, yet a year later he reports that he still relaxes to quiet himself.

The case is cited not as proof of the efficacy of the present method, but as an illustration of the technic of an abridged form for acute irritability where quick results are needed. If we assume that the method was effective as described, it is clear that the relaxation served in place of a notable dose of bromides or other sedatives. The disadvantage of the drugs is that they are depressant, toxic; on the other hand, the relaxation simply economizes the energy of the patient without depression and is refreshing. However, it requires time and patience on the part of the physician.³ In difficult chronic cases the matter must be done more thoroughly: It may be necessary to devote one-half to two hours or more before even the first muscle group may be properly relaxed.

The second illustration will give a more adequate idea of the method.

The patient was a fretful, unmarried woman of about 55 years, convalescing after the removal of her gall-bladder, which followed a first operation leaving a fistula for about one year. She was undernourished, weak, tense and irritable and complained of insomnia of more than 20 years' duration. She retired at about 11 or 12 p. m., going to sleep readily, but awakened at about 2 a. m., then hearing the clock

strike for hours. In the morning she felt fatigued. Some years ago she seemed to have suffered from globus hystericus with difficulty in swallowing. The family history is marked with chronic organic disorders, nervousness and insomnia. One sister died with diabetes and cerebral hemorrhage; another with chronic nephritis, exophthalmic goiter, glycosuria, hypertension; a brother also had nephritis with hypertension. Physical examination revealed two operation scars near the gall-bladder, where there was very marked tenderness on pressure. When she raised herself erect her face was contorted with pain from this region. On her face lines of apprehension were marked. Between the eyebrows there was a persistent furrow, while the forehead wrinkles and the nasolabial sulci were deep. There were signs of moderate nervous excitement such as shifting facial expression, occasional deep sighs and frequent changes of position of the limbs, head and trunk.

Only eleven treatments were given, each lasting over an hour, from June 11, to July 7, 1919. The original plan, at her request, was to give an abridged course of only five treatments. In these five sessions accordingly a rapid but complete survey of the entire body was made. At the end of this time her sleep was considerably improved, being sound until 5 a. m. when she awoke, later usually going again to sleep. She decided not to limit herself to so few treatments and the course was therefore prolonged to eleven, when she left for her vacation.

The first session was devoted to relaxation of the arms. The second to the arms and lower limbs. The third to the limbs and trunk. The fourth to what had gone before along with the shoulders, neck and forehead. The fifth to the foregoing, along with the eyes. The sixth to the same. The seventh took in the lips, tongue and throat. The eighth was devoted to a review along with special practice on the right lower limb which felt tense to the patient. The ninth was given over to a general review with special practice in noting incipient movements of the eyes, tongue and lips during thought processes. At the tenth session the attempt was begun to show her how to be relatively relaxed during day-time activities. She sat in a chair, relaxing her limbs, trunk and neck. At the eleventh session this was repeated, including the face, eyes and tongue so that she sat with diminishing mental activity, almost dozing away.

It was carefully explained to her that not ordinary relaxation was meant, not lying on the couch, apparently still and quiet, for a person might lie for hours relaxed in the ordinary sense, and yet remain nervous and sleepless. Rather the goal to be sought was progressive relaxation from moment to moment—a continual letting go of activities in every part of the body.

The abridged method used for this patient was as follows: She noted sensations of contraction while flexing both arms together, then was instructed to relax until no such sensations remained. In all her work she was successful in perceiving and localizing

3. That progressive relaxation does not depend upon suggestion for its effects has been discussed in a previous paper. In learning to relax, the patient actively and deliberately alters his own nervous condition under explanation and guidance, instead of being a passive recipient. In this way self reliance is increased in place of dependence on the physician.

muscular sensations, but at first she was able to detect these only during the first few seconds after gross movement. After considerable practice she was able, according to her reports, to note the dwindling sensations for many minutes. The second step was extension of both arms with passive resistance followed by relaxation, to the end that no sensations should be notable. Next her attention was cultivated toward contraction of the flexors and extensors of the forearms during closing of the fist, as well as in movements backwards and forwards of the hands against resistance made by the physician. The same bilateral procedure was carried out on the lower limbs. She came to recognize activity in the abdominal muscles by means of panting movements as well as bending forward of the trunk. She readily learned to recognize sensations throughout the chest wall in active breathing. As she sighed frequently and breathed irregularly, special practice had to be given at this point. The instruction was, "Just let your breathing go, don't bother to move your chest! it will take care of itself. Let the chest muscles go further and further every minute!" Progress was rather slow here but after a few sessions the sighs ceased to be a disturbing element. The usual practice was given with back, neck and forehead. She was markedly successful in noting activity of the eyes, tongue and the like during imaginary and thought processes.

The patient met with several striking difficulties. 1. She perplexedly asked, "How can I relax my arms or other part as far as you wish me to?" This question is not seldom asked of the physician. The answer should be simply made; the patient does not require a scientific explanation of the physiology, but simply wishes to know what to do. The reply may be for example, "Just cease moving the arm,—simply do nothing with it, relax it further and further from minute to minute." The patient is encouraged to practice and may be informed that he need not expect to be able to relax any part fully until he is able to relax the rest of his body fairly well. 2. The patient continued, as is usual with insomniacs, to make occasional slight shifting movements as she lay on her couch. She was informed that such movements seemed to be among the most important causes of her sleeplessness. It was explained to her that her facial expression suggested that such movements revealed certain mental traits. They showed that she became quickly dissatisfied with any position that her body assumed after a little time, then shifted a little in order to seek more comfort, then repeated this a little later, vainly seeking a position of perfect comfort, and so keeping herself awake by these little movements of dissatisfaction. Her face expressed this dissatisfaction. She replied that such movements were made unconsciously. During this conversation she made such movements and these were pointed out to her and she was shown and admitted how they resulted in dissatisfaction from this particular position she had assumed. She was then instructed,

"When you feel like moving some particular member, relax it instead until the inclination to move disappears." Evidently she misunderstood this direction, as was evident during the fifth session. After lying almost motionless intermittently during the hour she vehemently complained that the period had made her nervous—that she became uncomfortable in lying so quietly. The physician informed her that this indicated that she had not been following directions: She had been holding herself tensely motionless. This tenseness had been apparent at times to the observer and it made itself apparent to the patient in the form of what she called discomfort and nervousness. She had not been requested to hold herself quiet; it would be much better to yield to a temptation to move than to resist with effort; no effort at all was to be used. She was simply to let go, to relax, to do nothing, to cease activity, to use no effort. She failed to grasp this difference between voluntary inhibition and relaxation until about the sixth or seventh session, after which her improvement was rapid. The patient noted a slight trembling all over the body, as she expressed it, at times of nervousness. When trying to relax she would often note greatest difficulty with her right leg.

An approach to improving her nervous condition was made also from the mental side. Her previous physicians had treated her principally for gall-bladder troubles and had paid little attention to the harm that resulted from her mental irritability. It was now pointed out to her how profitable it would be if she would take daily annoyances less seriously. She readily agreed to this. It was made clear to her that a determination often repeated would do much good. She evidently made a sincere beginning at carrying out the instruction.

She was instructed to have a session of general relaxation of half an hour or more in the late morning and late afternoon. During the day she was to keep herself in as relaxed a condition as her occupation permitted. No sessions in relative relaxations were held.

On July 7 she reported that she had been sleeping better, but tended to wake up at 5 o'clock in the morning. She astonished herself by falling asleep several times during the afternoon. She had apparently slept several times in the presence of the physician. The lines in her face became rather less notable. Almost a year has elapsed since her last session. Her present report is that while she does not sleep so well as during the months following her treatment, yet her rest is considerably better than it ever was before, and it appears likely that the betterment will be lasting. Obviously eleven treatments are too few to overcome entirely an insomnia of so many years' standing. In such cases it is my custom to give many more treatments. However in this post-operative case, where acute conditions added excitement to chronic irritability, the use of progressive relaxation seemed to fulfill the aim of bringing quiet to the nervous system.

A forthcoming paper will be devoted to further points and principles of technic, such as securing the co-operation of the refractory patient, variation of instructions to the patient, common difficulties in relaxing, and the method of securing mental quiet in difficult cases.

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THE STATE: ITS INTEREST IN THE HEALTH AND LIFE OF CHILDREN*

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This topic is not one of my choosing. However, I am in harmony with it except that I would change one word. I would change "interest" to "obligation." I would urge the obligation of the State to promote the health of children.

This obligation is impelled by the following considerations:

1. The conditions of bodily inefficiency found in so great a percentage of the young men of the nation at the very height of their physical vigor during the recent medical examinations of the draft. To some this may seem a hackneyed theme. Is it, so soon? Should not its lessons burn before us for generations until our childhood life is re-enforced and set in new currents by the intelligent action of society? We are a people who glory in a standard of culture equal to the strain of a diversity of opinion on many subjects. But here is a subject in which we should be a unit. It is not a sign of national health to find twenty per cent. of our young manhood unfit when the test comes to meet the most exigent duty of citizenship, that of national defense. May not this condition even threaten national permanence? How can it be an asset to that hope of progress which is the very essence of a nation's life? Going deeper than any statistical search consider the fact that our educational practice for centuries has almost ignored the teaching of any knowledge concerning the structure and functions of the human body. Consider that your children and mine will be taught a too full curriculum of terrestrial and celestial knowledge, but will grow up without being able

to name the bones of the skeleton, much less the lobes of the brain or the tracts and coverings of the spinal cord. Even as a matter of cultural interest it would seem that the body is among the first. Sir James Paget speaks of it as "the most complex mass of matter in the world." Our school teachers are left in such ignorance of the structure and functions of the body that many of them still feel it an indelicacy to be asked to know, much less to teach these subjects. I do not say this to criticize the schools. They reflect the mind of society, perhaps its best side, and this fact but emphasizes our fatal lack of appreciation of considerations fundamental to race perpetuity, to say nothing of race progress.

Jokes often reflect the deeper feelings. Is it well that many physicians make a joke of the ease and unconcern with which they forget anatomy and physiology? And how they half doubt bacteriology and pathology! What do these people remember? It is to be doubted whether they remember even the constituents of the ready-made tablets with which they jokingly attempt to meet the health needs of stricken people and a stricken body politic.

We can be thankful that there is a sum of medical knowledge, the result of high hopes, of toils unmatched, of sacrifices extreme, of martyrdoms for humanity; this knowledge is accurate and comprehensive. It is available, efficient, and more and more adequate. And medical practice is fast passing beyond the stage where it has remained so long, of merely meeting emergencies which have gotten to the sensory nervous system of occasional individuals.

Medical practice is coming to be the application of what we know to both the meeting of individual emergencies and to the prevention of disease and the promotion of health. It is somewhat clearly discovering even a more profound and adequate endeavor, that of actual race building.

2. The State is obligated to its children in view of the custodial situation.

On May 1st there was the following child and juvenile population in the custodial institutions of Illinois:

Lincoln State School and Colony.....	2,024
Dixon State Colony	299
School for the Deaf	359
School for the Blind	215
Industrial School for the Blind	82
Eye and Ear Infirmary	115

*Read before the Section on Hygiene and Preventive Medicine, Illinois State Medical Society, Rockford, Illinois, May 19, 1920.

Soldiers Orphans' Home	333
School for Girls—Geneva	449
School for Boys—St. Charles	851
Total	4,527

All but the last three of these institutions are directly related to the health of children. The last three are indirectly related thereto.

But what does this population represent? It is first of all an effort to discharge the obligation of the State to provide living conditions for children who cannot be cared for adequately in any home because of the peculiar nature of their maladies. It represents also the effort of the State to salvage as many as possible to some degree of self help and of responsible citizenship. Furthermore, it is a series of laboratories, sociological and medical, in which may be worked out at no risk or cost to these children, and only to their benefit, some of the problems of care and improvement of such cases. And lastly, the most responsible and efficient custodians of these institutions will heartily agree that they represent in part the failure of society to prevent very much of the dependency and delinquency found here.

If we consider only the burden of taxation necessary to meet the increasing needs of and for such places, we must realize the necessity of preventive measures.

Go over the etiology of the maladies of many of these children, and you have a mixed sociologic, psychopathic and histologic pathology. But all too frequently comes out of it the horrid results of the loathsome venereal diseases, of malnutrition, of trachoma, of birth palsy, of alcoholism and of psychopathic heredity. This brief mention includes predominantly causes which are preventable. Others could be added. The State must devise or seek the growth of agencies which shall control these saddest of all afflictions of childhood and of society.

3. The morbidity situation as to preventable diseases. During the past four years Illinois, in common with other parts of the country, has been visited by two scourges, both of them being great enough to be historic. I refer to the epidemic cycle of poliomyelitis, beginning in 1916 and not yet closed, and the influenza pandemic of 1918-19, and which extended into the present year. Do you know that both of these historic scourges fell heaviest on children? You readily concede that as to poliomyelitis. While it was thought at a time that influenza fell heaviest

upon young adults, statistics have shown that childhood was the greater sufferer in both incidence and mortality. Who shall lead in efforts to combat these scourges if not the State? When others have turned to other problems the State must still endeavor by every means possible—known measures of control, known therapeutic agents, education and research—to combat them. So of their results. The State now cares for about sixteen hundred (1,600) crippled children annually, less than one per cent. of whom are institutionalized, and none of these permanently. These are given back to home, school and society able to meet life on practically a normal basis. And in this work the medical and nursing professions, the homes and interested citizens are made partners with the State in a piece of reconstructive work which is adequate from every viewpoint. Not as scourges of pandemic proportions but as constant factors in child deterioration are other preventable diseases. Their mention is sufficient—trachoma, ophthalmia neonatorum, whooping-cough, and measles, these latter with their known relationship to the greatest of all scourges, tuberculosis, scarlet fever, diphtheria, and the rest, all of them having important relationship to the invalidisms and breakdowns of middle life.

From time to time the State must renew its determination to push to a conclusion the fight against these childhood and race destroyers. The State must gather strength from the necessities of the case. It does not need to "look for trouble." The enemy is ever at the gate.

Maternity and nutritional considerations. The Children's Bureau at Washington has recently arrived at conclusions which place the death total of children under one year of age in the United States during 1919 at one-quarter of a million. These died of preventable diseases. From the same source announcement is made that twenty-three thousand (23,000) mothers died because they had no skilled care when they were to become mothers. This means the needless death of a mother every half-hour, and of five hundred babies each day. Back of the deaths of these mothers is poverty and ignorance. Poverty producing conditions where the mother must work up to the time of confinement, be denied skilled care at the time, and return to work a very few days afterward.

Last year the United States Department of

Agriculture spent \$47,000,000 to prevent avoidable loss in crops and live stock, and for the improvement of the same. We do not bewail this expenditure. Food production must be adequate if there be a thriving race at all. But this pitiful gap between supply and demand must be closed. How feeble are our agencies to prevent this awful wastage of human life. And yet the conscience and intelligence of almost any American community are sufficient if utilized. This conscience and intelligence must be mobilized. Did we fight a war to prevent war? We believed we were doing so during its progress. Let us prevent a greater yearly wastage than that of the world's most disastrous war.

The State is interested in the nutritional defects of children. These defects are due not so much in our country to a lack of food but to an unbalanced diet. "What to eat" is more than a cook's question as she considers the palates and appetites of her family. What to eat is a question to be answered for millions of children who without its answer must suffer some form of deprivation disease not measurable merely in terms pathological and physiological, but in terms of happiness and efficiency. And this is a problem which can be met with a minimum expenditure for charity in Illinois, but with an adequate expenditure in educational effort in schools, homes, doctors' offices and health centers.

5. Lastly the State is cooperating with every agency, professional, public or private which stands for scientific hygiene and public health. It is in the field to guide, to standardize, to supplement, to make authoritative, to cooperate in service. It is not so much marking out new paths as it is meeting actual exigencies. It has no interest in innovations as such. It is not asking so much who has failed or who should undertake as it is getting beneath the actual burden.

It has the vision of the needs and rights of childhood and of the nation. There lives again in the soul of the State the words of Mrs. Browning:

"Do you hear the children weeping, O my
brothers,
Ere the sorrow comes with years."
For the State knows
"That the child's sob in the silence curses deeper
Than the strong man in his wrath."

DISCUSSION

Dr. Elizabeth B. Ball (Quincy) agreed with Dr. East in the opening sentence of his paper, in the word "obligation" instead of "interest." During present conditions, the state is obliged to have institutions where children can be put to be taken care of. The state should be obliged to look after these children before these maladies develop, then all of these institutions, or at least some of them, would not be a necessity.

About two years ago when baby weighing was established by our national government I invited Dr. East to Quincy to give a talk or read a paper. He told me he couldn't talk and he didn't want to read a paper but he would come. We arranged to have children there just for him to see, no matter what was the matter, and we invited many to bring them and in that way we started our infantile paralysis clinic. We are continuing that and have found it of wonderful benefit.

Many come because they think the baby isn't normal and want Dr. East to see that baby. We have to send them away if it is not the thing that Dr. East treats.

From the time of the baby week we established the infant welfare station. Wednesdays from two to four the children are brought and taken care of, that is, weighed and measured. If there is anything the matter with that baby and they have a family physician, they go to the family physician; we don't step on anybody's toes. But if they are free to take our advice, they receive it and they are grateful and they come back and keep coming back. We don't have any trouble at all. It has been going on now for over two years.

It seems to me by these talks from this infant welfare clinic we help to educate the mother during her pregnancy period. In that way she is better prepared and knows how to take care of herself and her baby.

Another thing that I think has been helpful is the Home Bureau. (It is a philanthropic society, I will admit.) It is an association of women who are interested in a great many things in the home. One of the big things is putting in school lunches. Of course, the cities don't need it quite as badly as the rural districts because the children in the rural districts have long walks and they have to take cold lunches. These women have established this lunch at a very minimum cost and some at no cost.

A great many of these agencies are helpful and it seems to me the state is making a big effort toward helping in the infant life and the health of the children, and if it is only continued and with our help and cooperation I think that it is going to be very successful in the future.

I think we owe a great deal to Dr. East for that division of which he is the head. We can't be narrow-minded about these things; it is for the welfare of the entire nation and it is from the babies and the children we look forward to our future citizens.

Dr. G. C. Runkle (Stockton): First of all before

beginning a discussion of Dr. East's paper, I feel that we of the profession and the people of the state of Illinois should pay tribute to Dr. East for the work he is carrying on, and to Governor Lowden for making it possible to carry on this department of Child Welfare. Who knows? Perhaps the fact that each has known the sorrow of stricken childhood in his own home was the original incentive for the beginning of this work. It has now reached such enormous proportions that Dr. East himself, during the year 1919, was able to advise over 1,300 children. If this is possible for one man with a few co-workers, what might be accomplished with adequate finances and more men of Dr. East's ability?

If it were possible to have this clinic—which now is mostly a consideration of crippled children—to include a psychopathic department, what might be expected in the detention and control of our morons and other mental defectives? And if it were made to include a department for the care and education of the expectant mother, what might be expected toward a reduction of the frightful maternal mortality that now exists?

And last but not least if it were possible to include in this category a department for instruction in infant feeding and nutritional disorders of babies, the enormous annual infant mortality might be considerably reduced. Not only might this instruction be well for mothers and nurses, but also for the local physicians who too often allow the details of this important work to slip from their memory.

In this connection it seems to me that a word relative to the attitude of the profession as a whole concerning this clinical work might be timely. It has struck me forcibly on attending the clinics conducted by Dr. East, judging from the meagre attendance of the local physicians, that they are not in full sympathy and accord with the state's interest in its child life. Perhaps they feel that it encroaches on their private income; but such is not the case—at no time or in no instance does the state aspire to usurp private cases, but rather to help the rank and file who are unable to secure adequate private care and instruction.

It seems to me that there should be no antagonism but rather the heartiest cooperation of the entire profession.

I want to emphasize a very important point made by Dr. East. Of these 1,600 crippled children treated annually, less than one per cent. were institutionalized. Only we who have personally gone through an experience of this kind can fully appreciate what it means to have these children treated in the homes and not carted off to a hospital for six months or a year.

Let us look forward to the time when the money that is now spent in the upkeep of state institutions will be appropriated for the better purpose of fitting our crippled and defective children for some useful vocation.

CUBISM IN MEDICINE.*

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WINNETKA, ILL.

Frederick Peterson, in outlining the progress of psychiatry, remarks, "Psychoanalysis is to psychology what cubism is to art."

Cubism is a phase of impressionism. Impressionism, as Bacon tried to show by his "Idols," tends to dominate science. Bacon himself was so much an impressionist in science that, as William Harvey said, he "wrote upon science like a Lord Chancellor." Lord Chancellors and other equity judges evolve science from their internal consciousness.

From impressionism comes that obsession of the obvious which does not see that

"Errors like straws upon the surface flow

Who'd seek for pearls and truth must dive below."

The truth of this couplet has been voiced in the philosophic axiom that every truth is overshadowed by a sophism more like truth than truth itself.

Medicine has a ready test for impressionism in the etiologic moment consisting of 1. the congenital constitution, 2. the state of the constitution at the time of excitation, and 3. the nature and extent of the exciting cause. So-called "Practical" men, from a financial bias and a desire to pander to a patient's prejudice, often ignore the etiologic moment. The result is cubism in medicine, which retards evolution and mars the art.

From the malpractice immunity given by anesthetics and antiseptics, surgery has quite naturally given birth to the most glaringly obvious of these cubisms. Perhaps the most exquisitely absurd were the rival procedures of cervix incision and trachelorrhaphy. In the eighteen-seventies Simms' absolute claim that cervix stenosis caused most neuroses in women, as well as many constitutional states, was uppermost in the minds of the great majority of physicians. Rare, indeed, was the seemingly stenotic cervix which escaped the surgical slit. In those years, under the absolute cervix lacerations notions of Emmet, few cervices, torn or not, escaped tailoring. Many surgeons who had slit cervices under Simms' theory were found sewing them up under Em-

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met's. At the same time an oophorectomy itch-set in. Oophorectomy was done for producing an artificial menopause, and to "cure" such neuroses as were of mythically reflex character.

In 1900 leading surgeons followed the physiologic neurologists in denouncing oophorectomy except for surgical reasons. Even then it was to be done in a conservative fashion.

The surgeons of the seventies and eighties were not the only cubists who ignored the constitutional elements of disease and took into account only the superficial, reflex exciting cause. In the early seventies during a therapeutic nihilistic craze, quinine was discarded because of a supposed "tonic action on the fibres." Many physicians, like many charlatans, ignored the fact that any remedy to be of value must try inherited and acquired defects of the constitution, and hence produce untoward effects. The dangerous fallacy that a drug will do no harm if it does no good arises from an erroneous belief in these untoward effects.

This erroneous belief has produced drugless quackeries. The same belief influenced the physio-medicalists who do not use poisons, but give large doses of drugs like lobelia.

Cubism masquerades under the guise of pathology as well as therapeutics. It played a great part in the varying pathology of tuberculosis. In the eighteenth century, and up to the early nineteenth, the specific contagious doctrine of phthisis dominated medical thought. In the eighteenthies, under the influence of Niemeyer, the "acute inflammatory" doctrine took its place, to be in turn succeeded by the specific doctrine in the nineties. Koch denounced clinicians in the early nineties for denying that human tuberculosis was identical with bovine. In the late nineties he denounced those who had accepted his theory, and claimed that the two were totally different.

Views of the pathogenic influence of syphilis have changed in the same way. In 1880 Fournier denied the nonspecific influence of syphilis, and claimed that it never produced true parietic dementia. In the nineties he said parietic dementia was always due to syphilis.

Cubism in ophthalmology found its extreme outcome in the "cylinder" quacks who "cured" everything from paresis to corns. Certain quasi-regular ophthalmologists wrote volumes to dem-

onstrate that mental and moral disorders of genuises were due to uncorrected errors of refraction. Some of them failed to cure epilepsy in epileptic colonies, though the cases were selected by themselves. The "canalopath" also is here in evidence. "Orificial surgery," that apotheosis of reflex cubism, left a trail of suffering, and a huge amount of malpractice judgments against orificial sanatoria.

One result of this charlatanism was the number of reporters who were converted from pathologic into physiologic liars by operations on their rectal "pockets." The orificial association still meets, but most of its patrons have found congeniality in other cults.

Anesthetics and antiseptics, which so boomed cubism in general surgery, play a part in the cubistic doctrine of local infections due to pyorrhea alveolaris. Medically trained dentists have repeatedly shown that constitutional states, like autotoxication, scorbutus, diabetes, nephritis, gout, and so on, play a great part in pyorrhea. This factor is complacently ignored by tooth-extracting therapeutists and x-ray men. Conservative dentists have shown that x-rays often not only fail to find local infections, but seemingly reveal them where they do not exist.

As the reflex ophthalmologist could see nothing in man but one vast eye, so the x-ray tooth-local-infectionist-extractor can see man only as a tooth. Similar cubisms exist in rhinology, otology and laryngology, but in less dangerous fashion.

Reflex neuroses are less common in the practice of neurologists than of surgeons, except when such neurologists pander to medical cubisms. The latter type confound biochemic disorders like hysteria and neuropathy with organic diseases. Hysteria is a constitutional instability responding excessively in a psychic, otic, ocular, laryngologic, sensory, joint, spine, trophic or vasomotor direction to slight physical or psychic excitations coming from within or without. This constitutional instability mimics every possible disorder.

Every form of cubism from prurigo secundi (or operative itch) through mesmerism to Eddyism and miracles, has played a part in its "cure."

Just now psychanalysis, the "masculine protest removal" of Adler and the association juggling of Jung, is foremost among the remedial procedures. The last two are offshoots of the

school of Freud. There are lay psychoanalysts to whom, as to the osteopath and chiropractor, male and female hysterics resort. Incorrect diagnosis is the serious failure of the cubist here. There are not only organic complications of hysteric origin, like psychically caused bruises and the religious stigmata, but also renal and hepatic states. Anxiety and fear often exert a repressive action, causing the pale urine and the whitish stools of nerve states. In such conditions as these, elimination is bad. As there is a low degree of urea, many cylindroids, much indican, and abnormally low or very high degree of acidity but no albumin, sugar, hyaline or granular casts, the kidneys seem normal. From this results the large number of renal cases found by Brill in patients referred to him for psychoanalysis.

The vicious circle was ignored by the internist cubist. He didn't recognize that mental stress often produces physical results which will not yield to psychic therapy. Blistering can be done by suggestion in neuropathic subjects, but suggestion will not cure the resultant blister. Mental and physical cannot be separated in their interactions. While I am willing to admit with Bleuler that psychoanalysis represents an experiment out of which one may often infer correctly certain definite psychic processes, most of it as practiced by our medical cubists is, in my opinion, meretricious or worse. The work that has been done with patients I have seen leads me to wonder why a few of the psychoanalysts I could name are not themselves under psychopathic observation. They interpret something sexual into every dream. "Everything must be 'interpreted' in order to get it to mean something else (the meaning looked for, or for the sake of analysis, hoped for)." It makes no difference to them what the dream is, they analyze and fabulize it in the *desired* direction. It is not by any means an analysis of the patient's actual mental life. It is chiefly the interlocking thought of the psychoanalyst. Haberman says it is only "constructing into the patient's words meanings occurring in the interpreter's mind." "A diagnosis in the Freudian sense," said Stroubli of Basel, "is a diagnosis of the mind that made it."

The Freudist interprets something sexual, often vile, into the thoughts and dreams of patients, where there is not the slightest excuse for it. Again quoting Haberman, "To Freudian

writers the entire language is made up of two groups of symbolic words, half meaning the male, the other the female genitalia. If any words happen to be left over they stand for incest, rape, anus or fecal associations, or for the fornicative, generally speaking. Hence the analyses, if not all, at least the larger majority, are filled with ideas of illicit love, masturbation, actual or desired or dreamed-of-adultery, incest or fellatic, or Lesbian and abnormal desires and practices." As the cubist ophthalmologist can see nothing in an ill person but an eye, so the hidebound Freudian can see nothing but sex.

I do not undervalue the sex element in disease. Every sensible physician considers the sexual life as carefully as he does the digestive tract; the gynecologic is thought of in the same colorless way as is the laryngologic. But the Freudian has reduced the matter to an absurdity, and a nauseating one at that. "They have frequently forgotten," as has been so well said by Dr. Mayer Solomon of Chicago, "that each individual is a member of the human race, and that physiological and biological processes cannot, at least not always, be explained from a narrow, purely individualistic standpoint, let alone a psychologic one. Individual and racial psychology must be combined. The 'dynamic and mechanistic viewpoints are supplementary.'"

The question naturally arises to the normal-minded physician, why should sex emotions alone give rise to disturbances? In other words, why regard sex emotions as the root of all emotions?

Kiernan remarks:

The underlying phenomena of mental activity, according to Freud, is the wish to exist from the nutritional and reproductive standpoint. At the outset, as many biologists like Rolph showed the reproductive is an evolution from the nutritive function, which implies, moreover, fully developed consciousness.

The older psychologists, who called these processes instinctive, put them more nearly in their true place. The placing of a sexual indifference from its possible developments by environment in the same group as homosexuality is as illogical as the confusion of the coexistence of sexuality perfectly developed with the states where it coexists with other natural functions. Freud claims that "the child's sexuality is polymorphous-perverse; that is, that it is made up of four rudimentary instincts: heterosexual, homosexual, sadistic and masochistic. The child is always autoerotic." To any student of sex psychology who has followed the evolution of sex, this ex-

hibits a serious miscomprehension of the generalized type of sex in the child whose sex organ outward expressions often occur, as Renouf has pointed out, before birth. Sex does not exist in the lowest protozoa, but the reproductive state there gradually passes into hermaphroditism, then into the separate sexes. Psychologically the same evolution occurs. Masochism is not diverse from either homosexuality or heterosexuality. It may occur with either and so may sadism. While Freud plays here to the amateurish desire for absolute terms, he ignores fundamental laws of evidence.

Dr. Tom Robinson points out the error of the Freudians when he remarks that "therapeutically we are exhorted to believe the most powerful, if not a *sine qua non*, viz.: Freudian analysis may completely fail even when the mechanisms postulated by Freud are extensively revealed, so that catharsis may not produce cure at all; whereas, in other cases, the fact that the Freudian mechanisms were not found did not hinder a complete cure by the ascertainment and mutual cognizance of quite other mechanisms that we are asked to believe essential for the production of psychoneuroses. In contrast with Freudian sex analysis *à l'outrance* is the success of pure psychoanalysis; analysis without the shibboleth which have grown up around the work."

God knows we have been surfeited with fads and fallacies enough in medicine, but I think this is the most disgusting of all. There is another fad coming, if it is not already here, which will, of course, be overworked (mark my prophecy), and that is "Mucous Colitis." Already I have read long, recondite essays on the subject. One man says, "when the patient shows nervousness, depression of spirit, etc., it is well to look for mucous colitis." And I will assure the doctor that he will invariably find it in such nervous cases, and I'll also assure him that if he limits his treatment to the mucous colitis alone, he will fail to cure the "nervousness, depression of spirit," etc. He would better reverse the order.

Every operation, independently of its local surgical indication, has a constitutional effect which the late J. William White called the physical effect of the operation, *per se*; that is, of an operation as an operation irrespective of its location, character or severity. The mechanism here is the mechanism of the counter-irritant.

The body, mind and nervous system cannot be separated in the effects of and effects on ordinary

somatic disease. This is frequently shown in deaths from anesthesia. Here renal, cardiac, hepatic, as well as mental depression, really predispose to death, but are ignored because not obvious to the one anesthetist who ignores the congenital or acquired constitution. This is a serious yet frequent result of cubism in medicine.

Cubism is an assumption of what is obvious to a shallow mind, through mistraining, bias, or by hope of gain, or through that isolation in an intellectual rut which is miscalled common sense.

I should not like to be understood as denying value to *any* therapeutic measure which takes into account the patient's whole psychic and somatic mechanism at the time he is brought under care, with due allowance for congenital defects, period of stress and general acquired defects.

The "incurable" (of the regular) hysteric is always the peripatetic advertisement of the "drugless healers."

Diagnosis based on the etiologic moment is the only cure for cubism in medicine.

Rademaker, who was a good deal of a charlatan, claimed he made three diagnoses; the nosologic diagnosis, the etiologic diagnosis, and the therapeutic diagnosis. Unfortunately, he couldn't apply a very good principle, and from seeming empiricism used to cure Bright's disease with cochineal; "cure" meaning absence of albumin. This man, notwithstanding his rather logical formula, failed as a scientist because his diagnoses were based on *a priori* conceptions, not the etiologic moment. The nosologic diagnosis is often erroneous because the disease is regarded as a peculiarly mechanical process which creates excess or produces diminution in vital processes. The excess and diminution will vary in extent with the individual constitution. Too often, however, the disease is to the practitioner a procrustean bed, to which the patient must be fitted no matter how contradictory his symptoms.

In etiology, all but the alleged exciting cause is too often ignored. The more important general and local predispositions are ignored. This is particularly true of the "local infectionists." The therapeutic diagnosis must be based on broader principles than those of the empirical druggist, or those of the equally *ad captandum* nihilist. This has been very clearly put by Claude Bernard: "It will not satisfy the physician, though it may the empiric, to know that quinine

cures fever. The essential thing is to know what fever is and to understand the mechanism by which quinine cures. All this is of the greatest importance to the clinician, for when he knows it the quinine cure of fever is no longer an isolated empiric fact. This fact is connected with the condition which binds it to other phenomena which lead to knowledge of the laws of the organism and to the possibility of regulating their manifestations."

Attempts to deduce laws in medicine always rouse the antagonism of physicians to whom general principles are abhorrent and who have the school cramp. As Macaulay says, "They seem to think that the use of experience is not to lead men to the knowledge of general principles, but to prevent them thinking of general principles at all. They may play at bo-peep with truth, but they never get a full view of it in all its proportions."

Another phase of cubism is fanatic philoneism—the assumption that because a thing seems old it is of no value. The advice of Tennyson is here forgotten.

"Forward, then, but still remember
How the course of time will swerve,
Crook and turn upon itself in
Many a backward streaming curve."

Here, as elsewhere in science, it is too often forgotten that nature does not make leaps, but gradually evolves. Everything seemingly new derives most of its value from the old.

"Thought by thought is piled
Till some great truth is loosened
And the nations echo round."

But after all, why not cubism in medicine as well as in art? This is a grotesque age. Old-fashioned people often think the younger generation is grotesque, and the younger generation is almost invariably sure the old-fashioned people are. Is this not an age which shows us the Bolshevik as a politician? the picture press as a means of enlightenment? the parlor game of spiritism as religion? the orgiastic methods of advertisement as business? vers libre as poetry? the cubist's daub as fine art? Then why not cubism in medicine?

I believe one reason for the prevalence of cubism is due to the number of so-called specialists. The all round, broad-minded physician is being supplanted by the man with the one-track mind. But in my opinion, the former is the one

who, relying not entirely on instruments of precision, or on supposedly accurate laboratory tests or reports of specialists, but rather on his well-trained five senses, his judgment ripened by years of experience, and his abundant common sense, is better able to recognize disease with a certainty and an acumen denied to others, and better able to successfully and sensibly treat a person physically or mentally ill.

When a man is ill his whole system is disturbed. It is seldom that we meet with either the purely local or the purely general disease; in most cases the former is attended by some general manifestations and the latter by local symptoms of greater or less intensity. Moreover, it must be remembered and accepted as truth that there is an interdependence of mind and body. The physician who considers only the material must fail as must the one who considers the spiritual only.

It is an axiom that "The physician often heals by what he is rather than by what he does." He must inspire his patients with hope instead of frightening them. Coleridge remarked long ago that in chronic nervous ailments "he is the best physician who is the best inspirer of hope."

An editorial in the *Medical Times* is so pertinent to this subject I beg leave to quote it.

MAKING BRICKS WITHOUT STRAW

Set the scientifically trained practitioner of the prevailing type a definite problem in diagnosis having nothing to do with the patient's spiritual or intellectual life, and you will get a finely worked out answer.

All very well from a materialistic standpoint, and this type of worker is indispensable, of course, but it is just here, nevertheless, that the profession falls short and the freak cults come into their own, for beyond materialism very few of us get very far.

To say that those who reject our ministrations are half-educated and half-baked is not to cover the case at all. The fault lies chiefly with ourselves.

Even those physicians who cultivate things psychic attempt instinctively to materialize them, as it were, and work with formulae recalling motor mechanics and Teutonic hypotheses.

We must not forget that even when a pretty problem in definite diagnosis has been solved, our therapy too often lags far behind our skill in determining what the matter is with the patient—meaning by therapy the whole management of the case.

Hence the common recourse to quacks.

The trouble is not that we lack divine powers, but that we are not any too human.

Is it not true that the man who possesses great personal impressiveness—with patients—and is gifted in the way of swaying the sick psychically is very frequently regarded a bit askance, while incense is burned before the owls of the laboratory and clinic?

It seems to us that the gifts of all types of practitioners—if they really be gifts—ought to be conscripted, never tabooed or invidiously estimated.

Our diagnosis and therapy ought to take more account of human personality, in the practitioner as well as in the patient. Will papers ever be written on that theme, we wonder, as erudite and profitable as those that now preempt the columns of the medical press?

"The successful physician of the future," says Dr. Joseph Collins, "must make a biological study of human nature and of instinct if he would fulfill his privileges and discharge his duties. In no other way can he compete with the empiricists, supernaturalists and neoplatonists who have reaped such harvests in this country at the expense of the victims of incapacitating disorder of one or more of the bodily functions masquerading as disease of the nervous system." To which we would add that the "successful physician" of the future must apply the knowledge so gained—he must be something more than a mere student. In such a case he will not have to compete with "empiricists, supernaturalists and neoplatonists"—why should there be any such folk if the physician of the future lives up to his calling better than the practitioner of today?

No small part of the lamented Osler's success was due to his remarkable personality and understanding of faith as the great leveler of life, to use his own phrase. It would do matter-of-fact physicians a lot of good to read what he wrote on this subject in "The Progress of the Century" (Harper, 1901).

I hope no one who listens to me or who reads this paper will think I am belittling the value of many of the modern methods of diagnosis, for a successful physician, dealing as he does with concrete instances of illness or with sick persons, not only must be familiar with laboratory methods and must utilize the results of laboratory investigations, but he must study and observe the patient himself, investigating all manifestations and evidences of abnormal function and—the most important of his work—he must find ways and means of correcting existing irregularities. He must contrive to restore the patient to normal or as near to normal as possible.

He must not be content merely with what he

learns by the aid of the stethoscope, microscope, or x-ray, or from the chemist or bacteriologist, but must go into the case from all sides; he must take into account all his faculties and functions, mental and nervous, as well as physical, all his surroundings, his conditions of birth, of parentage, and hence of inheritance. Nowadays a physician should be more than a narrow specialist. He should be broadly educated, liberal-minded, skilled and interested in matters outside his own immediate work. He should possess a wide knowledge of our common humanity in all its aspects.

Such knowledge can be obtained only by studying mankind, interesting oneself in men's work, and by reading the best books on various subjects. I am getting very tired of the doctor who knows and can talk on nothing but medicine. We should be so versatile and well read that we could intelligently discuss politics, religion, sociology, philosophy, music, literature in all its phases; in a word, our mental machinery should be large and capable of being readily shifted at will to suit the figures that move on the mental stage of our patients' minds. Man is a complex being, a conscious spark of divinity embodied in matter, and no part of his nature can be neglected or ignored without affecting the whole man in great or less degree.

"Disease is far more important and far deeper than an aching head, hurried breathing or a fluttering pulse. It is something much more serious than the mere interference of the mechanism of life. The measure of its evil is not the increased rapidity of the pulse, not the daily wasting of the body, nor its numerical frequency in the ills of mortality, but the degree to which it so tells upon the mind, heart, will and power of man, that it prevents him from doing that work in this world which it has been given him to do."

What I deplore is the lack of common sense in the practice of medicine. It has seemed to me that some specialists, in their zeal to try out every new diagnostic method, have overlooked the fact that the patient was ill. In that case, the patient not being certain that the specialist he has called in will let him get well, and not knowing what will be the bill if he does get well, has a stimulant to speedy recovery that the cubist often fails to take into account; or the patient is so frightened that he drifts into some sanitarium, a hypo-

chondriacal nervous wreck, with a grip full of radiograms, cardiograms, laboratory reports, diet lists, and a long typewritten diagnosis giving some big, high-sounding name to his trouble—which in a great many instances would mean nothing to a sensible doctor, but might mean a tremendous lot to the already frightened patient.

It is to be hoped that in medicine there will be no lessening of sane, scientific investigation, but a great lessening of much damfoolishness and a sincere effort toward the cultivation of good, roundabout common sense, which has never been superseded by a college diploma and which is capable of seeing things in general instead of being wholly absorbed by a single aspect.

In closing, I would refer the ultrascientific cubist in medicine to the saying of so wise a man as Huxley: "Common sense is science exactly so far as it fulfills the ideal of common sense; that is, sees facts as they are, or at any rate without the distortion of prejudice, and reasons from them in accordance with the dictates of sound judgment."

SURGERY OF THE GALL TRACTS WITHOUT EXTERNAL DRAINAGE*

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CHICAGO

For some years the writer has attempted in an increasingly large proportion of his cases to close the abdomen without external drainage.

First: In abdominal conditions associated with infection.

Second: In abdominal conditions in which hollow viscera have been incised.

Under the first heading the writer has been in accord with most surgeons in closing the abdomen after the removal of an acutely inflamed appendix during the early hours of the attack, but has included an ever larger percentage of later cases in which free pus was present. He has closed upward of twelve consecutive perforated gastric and duodenal ulcers without drainage.

Under the second heading, the writer has closed the urinary bladder, the ureter, and the pelvis of the kidney after transperitoneal incision without external drainage.

The present paper has a bearing on both phases

of this work. In the larger number of gall tract operations one opens an infected tract. It is the present purpose to develop the idea that the closure of this infected tract may safely be made in a large proportion of patients requiring operation and the abdomen closed without drainage.

The presenting surface of the common duct is loosely covered with peritoneum which is usually split up more clearly to expose the duct proper before opening. On completing choledochotomy for the removal of stones, there is left an open duct from which stones have been removed, and which is usually the seat of a low grade infection. It is a patent duct. It is accessible. It is usually large enough to permit of any desired degree of manipulation. The treatment of this duct after it has been opened has varied greatly. It may be said to be the least standardized part of the operation of choledochotomy.

The treatment most widely used has consisted in leaving the incision open with a rubber tube sutured into it to carry the bile to the surface. The tube has usually been inserted toward the liver or so placed that the bile could pass through down the duct to the duodenum or out on the abdomen as when a T-shaped tube is used.

This method gives perfect drainage, but results in the loss of nearly all of the bile which must be regarded as undesirable. In recent years, the duct has more often been sutured, and drainage carried down to the line of suture. This has been modified by W. S. Halsted by introducing a drainage tube into the cystic duct and by placing a few cigaret drains in the neighborhood of the incision.

All of these methods have in common the objectionable feature of introducing the positive element of infection from without. It may be accepted as an axiom that a drained wound is necessarily an infected wound, whether drainage is in a previously infected territory, as in the neighborhood of the gall tracts, or into perfectly clean tissues, as in goiter.

The reasons given for external drainage are: 1. That drainage is necessary because the operation is upon infected tissues. 2. Because it is necessary to drain the infected gall tracts. 3. That a factor of safety is added by drainage after suture of the common duct, should the line of suture by any chance fail to hold.

The fallacy involved is this: 1. Closure of the

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common duct shuts off the infected territory within the duct from the clean tissues outside of the duct. 2. So far from drainage insuring against danger in the event of the line of sutures in the common duct opening up, it is the drainage that insures the opening up of the line of sutures. Drainage insures infection, and infection prevents the primary closures of the incision in the common duct.

An exactly analogous condition is incision into the bowel in which infected tissues are opened, but no one seriously suggests draining the abdominal cavity down to the line of sutures when the intestine is closed. The placing of a tube in the cystic duct to relieve back pressure in the gall tract system (Halsted) is logical when any doubt exists as to patency of the common duct, but when its patency is assured no advantage is obtained. Suture of the common duct and the closure of the abdomen without drainage has a very definite advantage over any type of drainage operation. Reaction about the site of operation is greatly diminished by the absence of a foreign body. The number of postoperative adhesions is therefore minimized. The immediate postoperative recovery is far smoother, resembling that of the simpler laparotomies. The late sequelae caused by extensive adhesions about the area involved are minimized.

The writer does not close the abdomen without drainage:

1. Where the common duct is so small as to render its primary closure technically difficult.

2. In the presence of fulminant infections that might jeopardize the life of the patient.

3. In the presence of persistent oozing of blood, particularly in jaundiced patients.

Technique: The field of operation must be adequately exposed. The peritoncum over the common duct is incised and the duct slit longitudinally. The cystic duct is not used as a means of access for exploration. The common duct is emptied of its stones and the patency of its distal end assured by passing into the duodenum a large sized scoop. Where any doubt exists as to the patency of the distal end of the duct, a duodenotomy is made opposite the biliary papilla, the orifice explored, incised, or stretched if necessary, and the duodenal incision closed.

The common duct is now closed, using the finest suture material obtainable. A double row

of sutures is used as in intestinal operations, but the amount of tissue turned in is minimized by the accuracy of the placing of the sutures.

The peritoneal covering of the common duct must be incorporated in both rows of sutures as an essential part of the technique, since only those hollow organs that have a peritoneal layer can safely be sutured and left free in the abdomen. At the end of the operation there is left behind a patent common duct that adequately drains the ducts above and freely communicates with the duodenum below. No more perfect drainage system can be devised. The permanent closure of the line of sutures is as certain as in the analogous case of intestinal suture and is based upon the same principles.

As an additional factor of safety, the writer has tacked the omentum down to the line of suture.

A large proportion of patients requiring a choledochotomy also require a cholecystectomy. The problem of the treatment of the stump of the cystic duct in cholecystectomy is somewhat analogous to that of choledochotomy. On clamping, severing, and ligating the cystic duct there is left a small stump in which the mucosa is exposed and unprotected with endothelium. The element of infection is not as perfectly controlled as in choledochotomy. The total amount of infection, however, is so small that the peritoneal cavity will adequately protect itself.

In the writer's experience, cholecystectomy has been done in every case in which the common duct was opened and drainage has not been instituted. The objections to the omission of drainage in cholecystectomy are similar to those that obtain in choledochotomy, and the answer is practically the same. It has been stated that the cystic duct has often opened up after ligation and the omission of drainage in the event of the duct spontaneously reopening would result in a serious disaster.

To this our answer is that the insertion of drainage insures the reopening of the duct by adding the element of infection and thus preventing primary union. The omission of drainage permits of the primary union desired and insures against the reopening of the stump of the cystic duct.

It is of the greatest importance that this conception of the mechanism of leakage from the

cystic duct and from the line of sutures of the common duct should be apprehended. It is basically wrong to regard such opening up of these structures as spontaneous, to be insured against by inserting a drain which is the cause of the accident.

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DISCUSSION

Dr. McWhorter: Normally the sphincter at the termination of the common duct offers a resistance to the outflow of bile of between a hundred and two hundred and fifty and occasionally five hundred or six hundred M. M. of water. The amount of pressure of the bile as secreted from the liver, as determined by Mitchell of Johns Hopkins is between two hundred and three hundred fifty M. M. of water. So that with a certain amount of obstruction at the outlet and the tension of the bile, there is a factor of breaking open the suture line in case it isn't carefully done.

I would simply like to say that from experimental work where I produced an additional obstruction in certain cases by inserting tubes and inserting various sized shot into the common duct, the suture line sloughed open where no drainage was introduced into the abdomen, and I feel that the increased resistance to the outflow of bile will undoubtedly produce an opening at this line of suture.

Of course, these conditions, as Dr. Richter explained, will not permit of primary suture, because it should not be done where there is any obstruction. Where you have obstruction of stones or bile, of course, they should be removed or primary suture, as I understand it, should not be done. However, there are cases where the sphincter is fairly normal, the ducts are dilated and act as a gall bladder with or without the gall bladder. It has been determined by Rost experimentally that in some cases after removal of the gall bladder, the ducts dilate and act as a bladder, and in those cases the operator might find the ducts dilated and I think there would be an element of danger in primary suture. Just how great this danger is I cannot say, but I have seen this suture line break over in animals from increased obstruction, not from the normal sphincter.

I would like to simply say that I feel that a certain factor of safety should be introduced by putting a drainage tube in the abdominal wound, not down to the suture line, but so that if the suture line should break there would be a tube to the surface.

DR. RICHTER (Closing Discussion): The resistance of the orifice of the cystic duct when it is pathological should always be overcome by incising it. When we have a stone in the termination of the cystic duct or when we have a stricture there, or when we have anything that prevents a fair-sized sound passing to the duodenum, we do a duodenotomy and incise the orifice so as to leave it wide open.

The normal resistance of this orifice is from 200

to 500 M. M. of water. I have tested out with the mercury manometer in circuit the line of sutures that I use and find that it will resist approximately 500 M. M. of mercury or 6,500 M. M. of water, showing how utterly impossible it would be for this pressure to open up a line of sutures. But I believe that that is an objection that must be thought of, not because of the danger of opening up the sutures, but because of the back pressure of the liver, an extremely harmful thing. This is objectionable and this must be absolutely prevented by suturing only those cases in which one is certain of having a patent common duct and, of course, that patent common duct makes a splendid drainage tube.

VACCINATION ORDINANCE UPHOLD

The Court of Civil Appeals of the State of Texas has recently decided on an appealed case that a city ordinance, which provides that the city board of health may require vaccination against smallpox of pupils, teachers and school employes, is valid. The court also held that vaccination could be required even though no epidemic of smallpox existed.

In rendering its opinion the court used the following language: "We hold that the ordinance is valid; not unreasonable on the claimed ground that it operates without reference to the actual existence of a smallpox epidemic in the city; that there is no unlawful discrimination against persons attending school, and it is not unreasonable and arbitrary in view of the conditions in the Mexican quarter of the city and the crowding together of people in the street cars, jitney, theatres, churches, passenger depots, factories, laundries, parks, etc. Nor does it deny appellant, or any pupil rights and privileges without due course of the law of the land. That other pupils not vaccinated are permitted to attend school under similar circumstances, if true, would only show the officers were not performing a public duty, but cannot affect the validity of the law."

This is an important and far-reaching decision as affecting the people of the State of Texas and means that, with the health ordinance properly enforced, the people of that state can be and will be protected against smallpox.

Eat and drink moderately to the end that thy days may be long in the land of the living.

The fellow who has plenty of push doesn't need to be always looking for a "pull"; for push, pep and punch are only the manifestations of prime physical fitness.

They must have known something about community problems in the days of Confucius, for among the sayings of this oft-quoted sage of the "flowery kingdom" is this: "The value of thy house dependeth on thy neighbor." And in this short sentence there is much food for thought.

ILLINOIS MEDICAL JOURNAL

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State society will pay no bills for legal services except those contracted by the Committee. Notify the Chairman at once. Do not employ attorneys.

Send original articles and all communications relating to advertisements to Dr. Charles J. Whalen, Editor, 4647 Dover Street, Chicago.

Membership correspondence to Dr. W. H. Gilmore, Mt. Vernon, Ill.

Society proceedings and news items and changes in the mailing list to Dr. Henry G. Ohls, Managing Editor, 927 Lawrence Avenue, Chicago.

Contributors will submit all copy for publication typewritten on standard size paper and double spaced. Copy not complying with this rule will be returned, if convenient.

MARCH, 1921

Editorial

THE MEETING OF THE STATE SOCIETY WILL BE HELD IN MAY

The annual meeting of the State Medical Society will be held in Springfield, Ill., May 17, 18 and 19, 1921. Any one contemplating at-

tending the meeting should make hotel reservations early. Those desiring to read papers before any of the Sections should communicate with the officers at once. The following are the officers of the Sections:

Section on Surgery

Geo. S. Edmondson, chairman, Clinton.

W. H. Amerson, secretary, Chicago.

Section of Medicine

W. L. Callaway, chairman, Chicago.

H. A. Chapin, secretary, Jacksonville.

Section on Public Health and Hygiene

J. H. Siegel, chairman, Collinsville.

Mary J. Kearsley, secretary, Chicago.

Section on Eye, Ear, Nose and Throat

Chas. F. Burkhardt, chairman, Effingham.

A. H. Andrews, secretary, Chicago.

STATE SOCIETY PROGRAM

The officers of the Eye, Ear, Nose and Throat section of the Illinois State Medical Society are making up the program for the meeting at Springfield, May 18. Any member desiring to present a paper should notify the secretary at once.

C. F. BURKHARDT, Chairman,
A. H. ANDREWS, Secretary, Effingham.
32 N. State St.

WAS HE INVEIGLED BY THE MEDICAL STAFF? THE PRESIDENT OF MICHIGAN UNIVERSITY SAYS HE WAS

In our February issue we had an article entitled "Michigan Doctors Threatened With Annihilation." The President of the University, M. L. Burton, on January 13, called the physicians of the State into a conference to ask them if it would be proper for the University of Michigan to engage in the private practice of medicine. Five hundred physicians from all parts of the State responded and said "No" in very emphatic fashion. The University of Michigan learned the sentiment of the profession of the State in a manner that will not soon be forgotten.

Now comes President Burton and says that he was inveigled by the medical staff. On page 51, of the February issue of the *Journal of the Michigan State Medical Society*, President Burton says: "I was inveigled into addressing this

meeting by the medical staff." Why inveigled? Why couldn't Victor C. Vaughan, our chairman of the Council on Health and Public Instruction of the American Medical Association, stand by his guns in the State which has paid his salary for lo, these many years? Where was Richard Cabot's little brother, all standing behind Dr. Burton who says they "inveigled" him into sponsoring this plan for a "closed hospital" run by a selected staff of the University of Michigan. Why not make the University Hospital an open one, if patients are to be received? Why not permit any physicians in good standing to utilize the hospitals for himself and his patients? Why turn over patients to men the selection of whom has been made by a Board of Regents who may be good business men but who might not rank so high as judges of competent physicians and surgeons?

THE UNIVERSITY OF ILLINOIS STATES ITS POSITION

IT DESIRES TO CO-OPERATE WITH BUT NOT COMPETE WITH THE MEDICAL PROFESSION

Desiring to avoid embarrassment similar to that in which the President of the University of Michigan finds himself because of the advocacy on the part of the medical staff of his institution of the plan of having the University Hospital (an eleemosynary institution) engage in the private practice of medicine in competition with the profession of the state, Dr. A. C. Eycleshymer, Dean of the medical department of the University of Illinois, has sent us for publication an article setting forth the history, aims, purposes and desires of the College of Medicine of the University of Illinois. The article is quite lengthy and will be published in full in the April number of our Journal. One paragraph of the article sets forth the position of the University of Illinois very clearly so far as it bears on the University's relation to the private practice of medicine. We quote in full:

"It must co-operate with State and County Medical Societies. It must gather its materials and disseminate its results through the physician. It must supplement but not duplicate the work of the practitioner. It must co-operate with but not compete with the medical profession."

HUMAN PARASITES SPONSOR COMPULSORY HEALTH INSURANCE, STATE MEDICINE AND ALLIED MENACES

Compulsory Health Insurance and similar schemes are sponsored and supported by the parasitic non-producers such as the cities are filled with together with professional politicians, reformers for revenue, amateur reformers, derailed menopausics, social workers, trying to decide what is good for somebody else. It would be a blunder to place in the hands of the government the functions now efficiently handled by private citizens. Do not let us violate the laws of good government by placing in the hands of these impractical people matters that require sound judgment for their successful operation.

State Medicine, the National Socialization of Medicine, the Practice of Medicine by State Universities, Social Insurance all foster and bring about autocracy and bureaucracy and destroy individualism.

Autocracy like monopoly is bad for the country. Bureaucracy destroys industrial development. The lack of necessity to hustle is bad for the future of the country. Individualism is never so good and sound and healthy as when, like a chicken, it must do a certain amount of scratching for what it gets.

THE FAMILY PHYSICIAN IS AND ALWAYS MUST BE THE REAL BACKBONE OF MEDICINE.

Dr. E. MacD. Stanton, Schenectady, N. Y., in a discussion on the New York Health Center Bill before the sanitary officers' convention, Saratoga, N. Y., Sept., 1920, said: "Now let us turn again to the health center propaganda. A member of the State Department tells us that 'experience has further shown that the best results in diagnosis and treatment can only be obtained by the co-ordinated efforts of a group of specialists working together.' No one will accuse me of underestimating the value of group medicine. I have been in it all my life but the propaganda for the so-called health centers does not put group medicine in its proper perspective. In the great majority of cases the real diagnosis must still depend upon the careful history and physical ex-

amination of one responsible physician. The family physician is and always must be the real backbone of medicine and I cannot see how either he or the public is really going to be benefited by propaganda which infers that he is not capable of doing his work properly."

WE IN WISCONSIN ARE REAPING THE
CROP SOWN BY THE DREAMING
AND IMPRACTICAL SOCIALIST
PROFESSORS AT OUR "WON-
DERFUL STATE UNI-
VERSITY"

We are about to have bills brought before our legislature that, if passed, will qualify all Christian Scientists, Napropaths, Osteopaths and Chiropractors, et id genus omne, to sign death certificates, prescribe medicines, run and have representation on hospital and dispensary staffs, and a few other evidences of mushy thinking on the part of those lambs of God who represent us at Madison.

We in Wisconsin are reaping the crop sown by the dreaming and impractical Socialist professors at our "wonderful State University."

Already the bill (No. 67A) to place the Christian Scientists on an equal footing with surgeons in cases of injuries to employes, in relation to the Workman's Compensation Act, has been introduced. It seems incredible that the public mind is in such primitive development. We are not surprised that the unwashed savage seeks his cures from the witch doctor of his tribe, but it seems our boasted educational systems produce mental development in the masses, not one whit above that of the wild African negro.

H. M. B.

NOTE—The above letter is from one of the keenest and most influential members of the medical profession in the Northwest. It shows the trend of the times and the insidious character of medical propaganda and legislation.

In several issues of the JOURNAL we have called attention to the University menace. This danger is especially conspicuous in the State of Michigan led by Dr. Victor C. Vaughan, chairman of the council on Health and Public Instruction of the A. M. A., the man who at the 1920 meeting of the Michigan State Medical Society admitted that as a doctor he has been

a failure, when (according to the statement of several present at the meeting) he said: "I have carried the little pill box and practiced medicine, and have been called in consultation from one end of the State to the other, and I can conscientiously say I have never done a patient any good."

Because of our co-operative work we were able to make compulsory health insurance a thing to be tabooed, and now comes State Medicine with University control and we have quite a different proposition to fight. If we are not face to face with a revolution in five years, it will not be the fault of our Sage Foundation, Our University Professorships and Other Highbrows. Power, Domination, that is all they want and all they lack is a great leader to make it possible. Napoleon started easy but he went far.

TAXING HOSPITALS THE LATEST FAD

Taxing hospitals is up in the Michigan Legislature this year. Michigan doctors are all wrought up over the proposal. The bill proposes to tax any hospital which does not open its doors to all comers. On its face the proposal does not sound unreasonable. If the bill provided that the doors be open to all licensed physicians we would give it our approval, but the question is who are practitioners in these days? The osteopath says he is—the chiropractor says he is—the absent-minded treater says he is, and where can the line be drawn?

Next will follow church taxation. A prominent eastern architect recently lectured in the forum and advocated the government's taking over all building supplies and doing the work of construction, government meat, government coal, government medicine; what becomes of Old Abe's idea of good government?

A BILL TO PLACE CHRISTIAN SCIENTISTS ON EQUAL FOOTING WITH
SURGEONS

A bill has been introduced into the Wisconsin Legislature (No. 67 A) which proposes to place the Christian Scientists on an equal footing with surgeons in cases of injuries to employes, in relation to the Workmen's Compensation act.

The various State legislatures this year are being flooded with proposed mushy legislation.

Nearly every year some new group of imaginary healers with little or no education attempt to be recognized by State legislatures and to be made by law the equals of medical men who have given years of study to qualify themselves to treat the sick.

The growing enslavement of the medical profession has reached an acute stage. If the medical societies of the land, City, County, State and National, were alert as they should be and would exercise the influence that they really could and if their officers were in general more alive to their responsibilities and exercised the power these organizations possess, a halt would soon be called to the everlasting meddling by politicians and derailed menopausics with the practice of medicine.

HEALTH CENTERS NOT NEEDED IN ILLINOIS

There is a movement on foot to start a propaganda for Public Health Centers in Illinois. The idea was taken from the Sage-Machold Health Centers Bill introduced last year into the New York State Legislature. The scheme emanated from the fertile brain of a layman and was taken up by a few medical specialists and a few writers on medical subjects.

In order to obtain the opinion of the doctors in the State relative to the need of Health Centers in this State the Public Relations Committee of the Chicago Medical Society sent a questionnaire to the President and Secretary of every County Medical Society in Illinois; the following is a copy of the questionnaire together with a tabulation of the answers thereto:

1. Are the people as well cared for medically in the rural as in the urban districts of Illinois?

Answer: Yes, 36; no, 16.

2. Is the number of physicians greater or less in the rural districts of your county than formerly? If so, do the people notice and complain of it?

Answer: Greater, 2; less, 25; same, 18; complain, 2.

3. Owing to improved transportation by automobiles, trolleys, etc.

- a. Do the physicians reach the sick more easily in the rural districts?

- b. Is it easier for the laity to reach the hospitals in the larger cities?

Answer: a. Yes, 51; no, 0.

b. Yes, 49; no, 3.

4. If the number of physicians in your county is proportionately decreased, is it
 - a. Because rural physicians are moving to cities or towns?
 - b. Because fewer recent graduates go to the country?
 - c. Because the number of physicians in the whole United States is smaller in proportion to population than formerly?

Answer: a. Yes, 17; no, 9.

b. Yes, 22; no, 1.

c. Yes, 17; no, 2.

5. If there is any such change in recent years between the proportion of physicians to the population in the rural districts, how much of it is due to
 - a. The question of fees and sufficient compensation to permit of a proper mode of living?
 - b. Imperfect laws regarding the collection of fees?
 - c. The advent of new cults?

Answer: a. Yes, 19; no, 6; same, 7.

b. Yes, 14; no, 6; same, 4.

c. Yes, 12; no, 7.

6. Is the lessened ratio of physicians to the general population due to any extent to the greater incentives in other callings?

Answer: Yes, 22; no, 4; same, 3.

7. Is there a hospital in your neighborhood? How many in your county? Do they have the respect and confidence of the whole community? In other words, do the well-to-do and the poor both patronize them, or do those who can do so go to hospitals in the larger cities?

Answer: Hospital in neighborhood: Yes, 31; no, 20.
How many in county: 3-0-0-1-0-1-2-4-0-4-6-2-0-2--8-2-1-0-1-3-1-70-2-1-0-2-3-0-6-1-0-1-4.

Respect and confidence: Yes, 30.

Patronized by all: Yes, 17; no, 5; doubtful, 2.

Go to city: Yes, 4; no, 3; some, 4.

8. Have you a dispensary in your neighborhood? How many in your county?

- a. Are they patronized only by the really poor and needy?

- b. Are the really poor and needy crowded out by those who can well afford to pay for medical care and treatment? or

- c. Do the poor as well as the well-to-do prefer to have their own physician attend and treat them for their illness whether they can afford to pay or not?

Answer: Dispensary in neighborhood: Yes, 8; no, 43.
Number of dispensaries in county given.

a. Yes, 0; no, 4; not altogether, 1.

b. Yes, 1; no, 12; no, "rich and poor use State products," 1.

c. Yes, 36; no, 0.

9. Have you scientific clinical laboratories in your county? Are they capably and efficiently conducted? Are they patronized generally by the

physicians or are they mainly used by the commercially interested?

Answer: Laboratories in county, yes, 22; no, 25.

Well conducted, yes, 20; no, 1.

Patronized by physicians, yes, 19; no, 0.

10. Are you in favor of establishing Public Health Centers? What are the conditions, professional, economic, or relating to the public health, which have influenced you for or against these centers?

Answer: In favor of Health Centers, yes, 8; no, 36; undecided, 3; doubtful, 1; conditional, 3; don't know, 1.

Conditions which have influenced, see quotations following.

11. What other facts have you which will help this committee?

Answer: None.

Extracts from replies received: "Such centers breed pauperization; our supervisors pay for medical attention and doctors do not have to do work for nothing."

"As we understand Public Health Centers we are opposed to them. We have good laboratories, capable physicians, and our hospitals are open to charity cases. It is our belief that the establishment of health centers would tend to pauperize rather than be conducive to self support and self respect. To us it seems a step toward Compulsory Health Insurance. The total expense of establishing a Public Health Center in our community would be much greater than the present way of handling cases and the good derived therefrom would be no greater."—Sec., Co. Medical Society.

"Do not believe Public Health Centers are good for either physician or public."

"You will find my figures about correct—and if you can see any encouragement for a boy to study medicine, you have me bested."

"I am unalterably opposed to the establishment of Health Centers. Any poor person has always been able to get good, conscientious medical service from doctors free of any charges. In fact, that is about the only necessity a poor man could get without paying for it. Long before Health Centers we should have centers for free distribution of other necessities which are just as important to health and which are very important as primary causes of disease. I speak of fuel, food, clothing, etc. I think it is high time that physicians as a group should boycott some of these pseudo uplifters, be they merchants, bankers or tients. The public in general has been receiving far too much free medical service and it seems a little too much free medical service and it seems a little free fuel, free food, or free clothing is in order."

"Absolutely not—people are being pauperized enough."

"I earnestly hope the committee makes a determined stand against this obnoxious and paternalistic and undemocratic idea."

"Professionally it takes from each physician a certain amount of patients who are able to pay for medical attention," etc. "It unnecessarily increases tax burdens."

"In answering question No. 10, it seems to me that the needy should be taken care of, but that the medical society should be the directing force, and take care of only those patients that are turned over to the centers by physicians."

"We are firmly of the belief that there is already too much medical charity in Chicago. We know that this condition exists because it has the sanction of a number of prominent Chicago physicians and surgeons. We know that these men are a small minority. We know that in wronging their fellow physicians they are wronging the public; for it is a well established fact that when anyone tries to furnish any product of human endeavor free of cost, the public will sooner or later have to pay the freight."

"We are not in need of Public Health Centers in this county. We are not cognizant here of their merits."

"Not needed in Lee county."

"The better class of patients, those who could pay their bill most easily, are the ones who patronize them."

"I am so opposed to State medicine and compulsory health insurance that I will quit practice rather than comply with its terms."

"Shall we Germanize U. S. medicine and let statistics and science freeze out humanity?"

"As it is a forerunner of State Health Insurance I am opposed to it, because I firmly believe that Health Insurance would be detrimental to both practitioner and public."

"Promotes the development, more and more, of the lay control of medicine."

"Rural illness is well taken care of and needs no Health Centers at all; it is foolish, visionary with no practical value in a rich State closely settled like Illinois. The people are satisfied, as they have every medical convenience now."

"Our conditions are satisfactory as they are."

"Even those who are soliciting for charities are getting paid for their work."

"We do not want a dispensary."

"Many people who can well afford to pay for services go to Chicago and get charity work done."

"Our members are decidedly opposed to anything that relates to State medicine."

"The public is not benefited by so-called Public Health Centers."

"Community Health Centers are unnecessary, as the laity is well taken care of by qualified physicians and surgeons."

"The ——— County Medical Society is a unit against Public Health Centers."

"The rural people are receiving better and prompter medical attention now than they ever have before."

"Too much paternalism all at expense of the physician who must pay his share of taxes. Railroads and industrial corporations take major surgery to large cities. Insurance companies dictate fees and cut them to starvation point. With Health Centers political doctors will run the game! Then I quit!"

This survey shows that Public Health Centers are not needed and not wanted. It shows that the people are well cared for and receive better medical care now than ever before; it shows that the rich and the poor prefer to choose their own physician; and it shows that the doctors in our State still holds to the high ideals of a noble profession and are always willing to help the needy poor when they are sick, and they will do this without suggestion or dictation from laymen or the medical men of yesterday.

This committee recommends that we oppose any scheme which may result in the establishment of Public Health Centers.

The Public Relations Committee of the Chicago Medical Society.

PRESIDENT OF THE UNIVERSITY OF ILLINOIS CONDEMNS FEDERAL AID TO STATES

David Kinley, President of the University of Illinois, in the *Chicago Evening Post*, January 11, in condemning the Smith-Towner Educational Bill says:

This Federal-State plan is known in educational circles as "the fifty-fifty plan." It is strange to me that so many people, even in a State like Illinois, have regarded it as beneficent. The Federal Government takes a dollar from Illinois, returns perhaps twenty cents of it, on condition that Illinois will furnish another twenty cents, and then permits the agents of the Federal Government a thousand miles away to tell her what to teach her children and how to teach it.

The present tendency in all this legislation is likely to destroy that system of checks and balances which is the very essence of our form of government. We are drifting toward a political system which will lodge authority in practically all matters of public importance in the hands of the Federal Government, and leave the States themselves and many of the communities in the States, *dependent upon action from Washington, and powerless to do otherwise*, because the Federal Government will have taken all the means at hand to do the things in question.

[This drifting] not only tends to produce disrespect of law, but it continually weakens the sense of duty and responsibility of the individual citizens. A long continuance of such a process will result in time in imposing on the people, even of a democracy, *governmental and bureaucratic control over a large part of their lives and actions*.

Note: We do not believe in an autocracy whether it is medical or political. We have repeatedly condemned Federal aid to States as it

applies to things medical as well as general. This practice if continued would build up an autocracy and a bureaucracy in this country equal if not superior to the German system. The disposition of certain parlor Bolsheviks to establish a universal system of Federal aid to states is the most pernicious single factor now at work attempting to destroy individualism and to impose governmental autocratic and bureaucratic control of the people of America.

The cost of running the Government is growing more and more excessive each year. The politicians plot, and the people pay. How long can this continue without check?

RESULTS SPEAK LOUDER THAN WORDS

The work of the contract practice committee of the Chicago Medical Society is attracting nationwide attention. This committee has been able through a campaign of dignified publicity to bring corporations, insurance companies and firms to a realization of the fact that medical men are entitled to compensation in keeping with the character and responsibilities of the services rendered.

The following case is typical of scores of others that have been settled in full since this committee began work five months ago.

CONTRACT PRACTICE COMMITTEE OF CHICAGO MEDICAL SOCIETY

The following is published for the information and guidance of our members:

"Dear Sirs:

Permit me to add this final chapter to the controversy with the Yellow Cab Company regarding their non-payment of a bill for first aid services rendered July 17th, 1919, as published in the Official Bulletin of November 20th, 1920. A representative of the Prairie State Insurance Association came to my office today expressing regret and offering apologies concerning the incident. He stated that their record does not show any bill having been received. Let us be magnanimous and not question the correctness of that explanation. The Yellow Cab Company has apologized, the bill has been paid today in full, the reputation of your Committee as being able to persuade some people to see and accept the point of view of some other folks has once more increased considerably, and everybody is happy. Please publish this in the Bulletin, so that proper credit shall be given your Committee by the profession.

Very truly yours,

Michael C. Coy, M.D."

A copy of the Official Bulletin has been mailed the Yellow Cab Company.

The committee publishes the correspondence between Dr. Overton Brooks and The American Mutual Liability Co. as a guide for members. Physicians are employed to give service and their correspondence should be direct and not with any agent of the one who employs them.

American Mutual Liability Insurance Co.
Chicago, October 20th, '20.

Dr. Overton Brooks,
542 S. Dearborn Street
Chicago, Ill.

File No. 1
Re. Lawrence Feldman
vs.
Adolph Selz Co.

Dear Doctor:

We have your bill for services rendered the above named employee, and beg to advise that we consider same entirely too high.

On October 2nd you show surgical treatment amount \$15.00. Kindly advise just what sort of treatment was necessary to give this man which warranted a fee of \$15.00. From October 3rd to 12th you show dressings amount \$27.00, or in other words you are charging \$3.00 for dressings. This is entirely too high, as the usual and customary fee for subsequent dressings is \$1.00 and in rare cases \$1.50. Accordingly we believe your bill is too high and feel that a fee of \$30.00 would be ample in a case of this kind.

Kindly let us hear from you.

Very truly yours,
Harry R. Berg, Adjuster.

Adolph Selz Co.,
501 S. Dearborn St.
My Dear Sirs:

A customary letter came this a. m. from your insurance company offering a ridiculous sum for the services that I gave to your man Lawrence Feldman. This man was in terrible pain and agony when he came to me and was in shock. I gave him hypodermic medication to relieve him. He was suffering from a severe burn of both hands and forearms and the work done upon him was a hundredfold more than is done upon an ordinary scratch or lacerated wound, and this office gets double the amount offered by this insurance company for dressings of this nature.

I have a written order from you to attend to Mr. Feldman and he is well satisfied. Kindly attend to this matter as I do not care to be bothered with any insurance adjusters.

Very sincerely yours,
Overton Brooks.

Dr. Overton Brooks,
542 S. Dearborn Street,
Chicago, Ill.

Dear Sir:

Your letter of October 21st to hand and I have

turned same over to my Insurance Company. That's what I carry Liability Insurance for.

Hoping you will come to an agreeable settlement with the Insurance Company, I remain

Yours truly,
Adolph Selz.
per E. C.

Dr. Overton Brooks,
542 S. Dearborn Street,
Chicago, Ill.

File No. 1
Re. Lawrence Feldman
vs.
Adolph Selz Co.
Injured 10-2-20

Dear Doctor:

Your letter of the 21st instant addressed to the Adolph Selz Printers Company has been turned over to us for consideration.

Please be advised that when the writer wrote you taking exception to the amount of your bill, he at least expected the courtesy of a direct reply from you. We have advised the Adolph Selz people not to send any more cases to you.

In conclusion will say, that \$30.00 is all that we are going to offer you in this matter, and if same is not satisfactory to you, you may take other measures to collect your bill.

Very truly yours,
Harry R. Berg, Adjuster.

Adolph Selz Co.,
501 S. Dearborn St.,
My Dear Sirs:

A letter from the American Liability Insurance Co. and signed Harry R. Berg, came this a. m. refusing to pay for the services given to Lawrence Feldman of your firm.

I met you in your emergency and gave you every consideration but I have not yet received any at your hand. I am positive that you can regulate matters if you so desire.

Mr. Feldman knows that I informed him of this insurance company as soon as I heard that they carried your insurance. Mr. Feldman spoke as if he would assist in the payment of his bill. I have fought this company before and I have won out and I intend to lay this before the Chicago Medical Society and I will take other methods of collecting if necessary.

They informed me that they gave you notice not to send me any more cases. Surely you are a free man and can do as you please. Other Insurance Companies send me checks daily and they do not question my fairness. I know that I have been fair to you and that is why I am writing.

Very sincerely yours,
Overton Brooks.

Dr. Overton Brooks,
542 S. Dearborn Street,
Chicago, Ill.

Re. Lawrence Feldman
vs.

Adolph Selz Co.

Dear Doctor:

Our assureds have forwarded us your communication to them of November 4th, and I can see no reason why we should deviate from the position taken by our Mr. Berg in his letter of October 27th.

In conclusion, if you desire to accept our check as indicated therein, please advise us.

Very truly yours,

G. A. Bruegger,
District Claim Manager.

Dr. Overton Brooks,
542 S. Dearborn Street,
Chicago, Ill.

File No. 1

Re. Lawrence Feldman vs.
Adolph Selz Co.

Inj. October 2nd, 1920.

Dear Sir:

We are enclosing herewith our draft for \$48.00 payable to your order in payment of your bill as rendered.

Please be advised that our Company is too big to argue and write letters to you taking exception to your bill. When we wrote you the first time we had carefully gone into this matter and were fully convinced that your bill was too high, and consequently, wrote you a strict business letter taking exception to such bill. Instead of having the courtesy of a direct reply, you took the matter up with the Company who felt exactly the same about your bill as we did.

However, as I said before, we will let you have the benefit of the doubt, therefore are herewith enclosing our check for that amount.

Very truly yours,

H. R. Berg, Adjuster.

This correspondence should help to harden any rubber spines left in the profession.

CONTRACT PRACTICE COMMITTEE
OF CHICAGO MEDICAL SOCIETY,
Thomas P. Foley, Chairman.

DR. DA COSTA TELLS THE TRUTH
EVERYWHERE WE MEET WITH UNREST AND
DISCONTENT. INDIVIDUALISM PUTS FORTH
CLAIMS AND IS MET BY SHRIEKS FOR
EFFICIENCY, THE VERY ANTITHE-
SIS OF INDIVIDUALISM AND THE
REAL FATHER OF DEGEN-
ERATION

Dr. John Chalmers De Costa, Samuel D. Gross,
Professor of Surgery and Clinical Surgery in the
Jefferson Medical College of Philadelphia, in his

address presenting memorial tablet to Jefferson Medical College, October 7, 1920, said many things that are quite applicable to present day conditions. He reviews the cause and progress of the world war and outlines the response of the alumni of Jefferson Medical College to the call of the country. The following paragraphs are of interest to everyone, both lay and professional, who is interested in solving the world hysteria.

Life on the old lines is done forever. We walk untrodden ways. We have left the Land of Certainty and sail the waves of Chance. Some Catos of the club dictate our policy. The world has become educated, sober, respectable, and horribly unhappy. Everywhere we meet with unrest and discontent. We treat this condition with entire imbecility. We consult few persons but governmental quacks. When resentment is actually flaming at arbitrary abbreviations of our liberty we meet the perilous situation by curtailing more of our liberty. Individualism puts forth claims and is met by shrieks for efficiency, the very antithesis of individualism and the real father of degeneration. For 25 years neither Congress nor a State legislature has passed a single act to broaden our liberties, and Congress and legislatures have passed many acts to limit and restrict them. All major crimes are enormously on the increase. Only petty offenses diminish. Real righteousness seems to have gone down to a great degree before meaningless convention. Many modern reforms to succeed would require as a basis the total repeal of human nature. The contagion of delusion sweeps over the entire earth. The proletariat is in the saddle. Drivers of milk wagons are paid more than professors of philosophy. The average bricklayer obtains greater financial reward than the average physician. Callosities of the palms command more money and more respect than convolutions of gray matter. Blacksmiths rank higher than scientists, and therefore Andaman Islanders must rank higher than psychiatrists. The church house is not nearly so wide open as the station house. It is financial wisdom to advocate the popular error. The frenzies of fashion madden great classes. Hate and envy are twin monsters unrestrained and gaining hourly in strength and ferocity. Tainted persons attain high office. Moral indignation can no longer gather irresistible strength. Character is vilely adulterated. The sense of personal responsibility seems to have been lost absolutely. Many a crooked business deal is regarded as a piece of admirable finesse. Inclination poisons duty. There is no respect for experience or common sense. Every demagogue has his followers, every fool his partisans. The air resounds with the brays of those who follow various philosophies and isms. Great masses have entered into the labyrinth of mysticism and regard the Almighty God merely as a sort of President of a Board of Directors. Logic has departed from thought and

reason from action. We see before us, grisly and menacing, the horrid figure of religious persecution.

"These giant hopes, these towering schemes,
Conceived beneath a blood-red star,
These frantic feuds and nightmare dreams,
I know them for the things they are."

Yet we Americans must not under any circumstance let the sacrifices of the war be rendered vain. We must fight to the death these evil tendencies. We must not abandon hope. We must ever look

With a poet's eager eye
Spite of critics scorning,
For the rosy bow of Hope
On the grey of morning.

It must never be said in history that our brave fellows died in vain. I know their young souls counsel us not to despair.

"No man to nurse despair;
But in the teeth of clenched antagonisms
To follow the worthiest till he die."

No class responded to the call of arms more nobly than physicians. When the war started there were but 500 officers in the medical corps of the army. When the armistice was declared there were over 30,000. In other words, during the war 98.3 per cent. of the officers of the medical corps came direct from civil life (George Emerson Brewer). The same was true relatively of the medical corps of the navy. Most of these doctors from civil life gave up practices made or in the making, abandoned hard-won positions, cast aside irrecoverable opportunities, and in not a few instances left families in poverty with scarcely means enough to provide food and lodging. Many wives and daughters had to go to work when the breadwinner had departed.

Most army doctors returned when peace was attained. Some returned to their old places and former prosperity. Not a few came back to find their positions filled, their practices lost, their former rivals living in abundance. How could any person dare to do such things to soldiers? He could not if we remembered the words of that splendid physician and prince of gentlemen, the late Lieut.-Colonel John McCrae, the brother of our own distinguished Professor of the Practice of Medicine. Colonel McCrae lost his life in Flanders serving with that magnificent corps, the Canadians. He wrote:

"To you from failing hands we throw
The torch; be yours to hold it high.
If ye break faith with us who die
We shall not sleep, though poppies grow
In Flanders fields."

Many never returned. Some were lost at sea. Some were killed in action. Some died of gas or wounds. Some perished of disease in camp or hospital. All of them alike entered the dark portals of eternity in patriotic service to the nation.—*Therapeutic Gazette*.

A LAWYER'S TRIBUTE TO THE DOCTOR WHERE WILL YOU FIND ANOTHER MAN TO MATCH THE AVERAGE DOCTOR?

Alton B. Parker, formerly Chief Justice of the Court of Appeals of the State of New York says: "Where will you find another man to match the average doctor. He lives the true altruistic life, devoting himself unreservedly to others. His skill and time are yours on the shortest notice, in the blackest hour of night, and in the worst of weather. His devoted unselfishness, ready sympathy and healthy good humor but increase his gray hairs. I, for one, expect to find a neat M. D. shingle decorating very many of the more palatial Heavenly Mansions on Goodand-faithful Avenue."—*Medical Review of Reviews*.

THE BOSTON SESSIONS OF THE A. M. A. HOTEL HEADQUARTERS OF THE SCIENTIFIC SECTIONS

The local Committee on Arrangements for the annual session to be held in Boston, June 6-10, 1921 has designated the following headquarters for the sections of the Scientific Assembly indicated:

Sections	Headquarters
Practice of Medicine.....	Hotel Somerset
Surgery, General and Abdominal.....	Hotel Lenox
Obstetrics, Gynecology & Abdominal Surg.....	Hotel Touraine
Ophthalmology	Hotel Vendome
Laryngology, Otology and Rhinology.....	Hotel Brunswick
Diseases of Children.....	Parker House
Nervous and Mental Diseases.....	Young's Hotel
Urology	Hotel Westminster
Dermatology and Syphilology.....	Copley Square Hotel
Preventive Medicine and Public Health.....	Bellevue
Orthopedic Surgery	Adams House
Gastro-Enterology and Proctology.....	Hotel Essex

Officers of the Subcommittee on Hotels are Dr. John T. Bottomley, chairman, and Dr. Stephen Rushmore, secretary. Communications for the attention of this subcommittee should be addressed to one of these officers at the Boston Medical Library, 8 The Fenway.

Because of scarcity of hotel accommodations we suggest making reservations early.

AN OBJECT LESSON

A member of the medical faculty of the University of Michigan was sent to a small town in the state as an extension lecturer. He was to be introduced to his audience by one of the town fathers, a veteran well known for his passion for oratory. Accordingly, it was arranged by the lecture committee that he should be allowed only a limited time for his introductory remarks.

The G. A. R. veteran, as usual, began his speech with a few reminiscences of the Civil War, and gradually worked his way through the succeeding periods of our history. One idea led to another until he finally hit upon the subject of graft.

"Graft is everywhere!" he roared. "You will find it in big business, in our Senate, in our House of Representatives—you will find it in our educational system—" A pause and a hasty glance at his watch. "Ladies and gentlemen, I take great pleasure in in-

roducing to you Doctor Blank of the University of Michigan."—*Harpers Monthly*.

THE GOVERNMENT SHOULD NOT PRACTICE MEDICINE

The Government Should Not Practice Medicine, except to the extent that its own wards may be cared for. For this purpose, the Government should employ physicians, and the very best that can be had, at such salaries as will attract the best. The responsibility of the Government, National, State and local, for the sick public, lies in the element of prevention. The effort on the part of well-meaning but misguided individuals to swing the Government into the practice of medicine is to be deplored and resisted. The most notable example of this movement is in the matter of health insurance, so-called, the stupendousness of which the proponents of the movement probably had no conception. And now comes the Sheppard-Towner Bill, providing maternity aid on a national basis, which appears to be another step in the direction of socializing the practice of medicine, through the medium of a governmental health agency. Laws for the establishment of health centers throughout the country, under government supervision, are along the same line, and are evidently based on the success of the venereal disease clinics that were conducted by State and Federal Health Departments during the war, many of which have continued in successful operation since that time. The fact that the venereal clinic was a preventive measure has been overlooked.—*Texas S. J. of Medicine*.

JOHNS HOPKINS NURSES ALUMNAE ASSOCIATION ASKS AID TO CARRY ON "HEALTH INSURANCE"

The Alumnae association of the Johns Hopkins Hospital School of Nursing cite as a public calamity the shortage of properly trained nurses in hospitals, private homes and in the important field of public health work which is the health insurance policy of future generations. This shortage of nurses is never so much in evidence as in epidemics such as the recent prevalence of influenza; the need, however, is always present and it is to fill this need that the Hopkins alumnae are asking for funds.

IS OUR GOVERNMENT TO BE CONTROLLED BY LOBBYISTS? IF SO, IT IS TIME FOR THE MEDICAL PROFESSION TO GET BUSY

J. J. Underwood in the *Seattle Times* about January first, stated that they were at that time 125 lobbies maintained in Washington. Two weeks later Senator Kenyon, of Iowa, added his complaint that "Washington is swarming with lobbies of every kind and description," so that "it is impossible for Senators to get to their offices without being intercepted by lobbyists

representing various persons or interests concerned with the passage or defeat of pending or proposed legislation." "The epidemic of lobbying is spreading like a plague," declares the *New York Evening World*; "and before very long we must make up our minds whether this is to be a government by duly elected and responsible representatives of the people or a government by lobby."

"Of course," points out the *Indianapolis News* and other papers, "all lobbyists are not crooks, trying to put through legislation that will be detrimental to the public good," but scores of the lobbies in Washington, declares Mr. Underwood, are "blatant, domineering, vociferous." Furthermore, he asserts, "they are in Washington for the purpose of blackjacking Congress into passing special legislation." We are told that—

"These lobbies are political, racial, social, industrial, and sectional. Few of them have any concern whatever for the general welfare of the nation or any desire to decrease the general expenses of the Government. They are determined by threats, persuasion, entreaty, or other means to secure for themselves and defeat for others legislation in which they happen to be interested. They have badgered and hectorred Congress till that body has reached the limits of its patience; Congress is tired of listening to pleas for special legislation.

BEARING OF THE CANCER PROBLEM ON THE PROLONGATION OF HUMAN LIFE

Dr. Joseph A. Pettit of Portland, Oregon, in the February issue of *Northwest Medicine*, in an article under the above named title says:

A careful review of vital statistics during the last quarter of a century shows a propitious decline in the death rate of all diseases excepting cancer. An analysis of statistics reveals a marked increase in the deaths from this disease.

This increase may probably be accounted for in two ways. First, cancer is a condition which develops in the majority of persons after the age of thirty-five or forty years; therefore, by reason of the increase of the average of human life to forty-five years, more people attain the age in which this condition develops. Second, more definite diagnoses are being made at present, and it is probable that no one now dies of cancer of some of the internal organs—where its occurrence is frequent—without diagnosis being definitely established by either surgical or medical means.

In other words, if the biblical limit for earthly existence were lowered from three score and ten to one score and ten, cancer would be practically unknown, excepting among the few who defied the edict. Or if, on the other hand, the world had remained in the state of medical ignorance which existed at the time of Columbus, or, for that matter, which exists at present in certain parts of the world; or should the impossible contingency arise whereby we should all embrace the alleged wisdom (or ignorance) of so-called christian science, etc., then cancer would be

either unknown, unrecognized, or unacknowledged, if not disavowed entirely.

Present statistics show that one woman out of every eleven and one man out of every thirteen die of cancer. It is also estimated that 5 per cent. of all deaths after the age of thirty are from cancer; while between the ages of forty and sixty the percentage is still higher. It is probable at the present time that 85 or 90 per cent. of those who acquire cancer do not ultimately recover. Analysis of these figures, together with the following, is rather startling. An analysis of over 10,000 postmortem examinations of persons who have died of cancer discloses the surprising fact that in over 19 per cent of the cases the cancer was still primary and at its original site, and that no metastasis had occurred. In this analysis breast cancer showed the highest proportion of metastasis, namely, only 3 per cent. showed no metastasis. The cervix showed almost the same percentage. Cancer of the fundus of the uterus, as well as of the fundus of other viscera, namely, the gall-bladder and the urinary bladder, showed a relatively high percentage of freedom from metastasis. The highest percentage existed in cases of cancer of the sigmoid.

In view of the fact that over 19 per cent. of those dying from cancer in this series of over 10,000 cases revealed that the disease was still limited to its local situation, we realize that early operation can yield a greater percentage of cancer cures than is being obtained at present. While it is true that some of this 19 per cent. may include cancer of inoperable regions, nevertheless a greater number of other cases should have the primary disease removed before metastasis occurs. At the present time the greatest hope for the prolongation of human life, in so far as the destructive influence of cancer is concerned, hinges upon two points: first, early recognition; and, second, early as well as thoro excision. To secure early recognition of cancer the education of the public must be made broader, and the responsibility for this lies somewhat with the medical profession. The success of early excision depends not only upon early recognition, but also upon trained surgical treatment. Errors are undoubtedly made at times, first, thru exercising too great conservatism in the excision; and, second, thru exposing the tissues and vessels to expressed cancer cells which are loosened either by the knife or by manipulation.

Radiotherapy has a limited field of usefulness, altho its use is most potent. Radium has a destructive influence upon the nucleus of the cell, all of its radioactivity being concentrated on the nucleus. With the nucleus destroyed, cell division ceases and a growth ceases to exist as a growth. The x-ray radioactivity is not so concentrated since it diffuses its effect upon the protoplasm as well as upon the nucleus. Therefore, an equal exposure of the two would lead us to believe that radium is the more efficacious. Radioactivity apparently produces a degree of fibrous infiltration which is not only inhibitory to the growth of the tumor, but also influential in checking meta-

stasis. Unfortunately, the structures of the skin act as a screen and nullify the effectiveness of the average radioactivity.

In conclusion, the greatest problem presenting itself for our consideration in this age is the problem of malignant neoplasms. It is reasonable to assume that, if we can master over this scourge the control that has been exercised over other scourges, the average of human life may be raised to sixty years.

REPLY TO A CHIROPRACTIC LEGISLATIVE LETTER

The following reply to a chiropractic committee circular letter was written by a physician, upon the request of a member of the Legislature:

"You are quite right in saying that the law should not discriminate against any method of treating disease. It is manifestly impossible to establish by law any method of system of treatment for the sick and afflicted. The ideas of all doctors with reference to the matter of treatment depend upon their knowledge of the structure and functions of the human body in health and in disease, and upon the causes of disease and the laws of health. Every year new ideas for the treatment of the sick are suggested. Much is yet to be learned, therefore the greatest possible encouragement should be given to honest, intelligent and educated men who work out new schemes of treatment and improvements upon old methods. Fortunately, the Texas law, recognizing this, does not require anyone to be examined on *methods of treatment*. There is nothing in the law to prevent doctors from employing any means that may seem good to them. The law does not discriminate against any school of medicine, nor against any system of treatment, past or present. Any person given legal authority to advise and treat the sick may employ prayer, pills, electricity, massage, manipulation, chiropractic adjustments, osteopathy, diet, rest, climate, water hypnotism, vaccines or any other means. No one applying for a license to treat the sick is asked anything about his ideas concerning treatment, and the examinations are conducted in such a way that the Board cannot possibly know whether any particular applicant is a homeopath, an eclectic, an osteopath, a chiropractor, a christian scientist or anything else. The only thing that the law discriminates against is *ignorance*. The law assumes that no one who is deficient in general education and lacking in a knowledge of the human body in health and in disease, can safely be give the responsibility of *advising and caring for the sick*. Nothing in the law discriminating against new ideas, or ideas in conflict with old established customs. Any educated and intelligent person can now legally employ chiropractic or any other means for treating the sick.

"You say you are interested in maintaining a high standard of efficiency in chiropractic. If you will examine the Texas law you will find that any one who has the necessary *general education* and the

necessary training in the fundamental branches (excluding all reference to treatment and to systems of practice), common to all so-called schools of medicine, can get a license and then practice chiropractic, osteopathy, surgery, diseases of the eye, ear, nose and throat, nervous and mental diseases, or enter any field, or use any method or system of practice.

"To assume the responsibility of caring for the sick requires a trained mind and, therefore, much more than special information on some exclusive cure-all plan of treatment. The surgeon does not give drugs. His chief plan of treatment is to operate, yet one trained in the use of the knife, scissors and needle, would hardly be a safe person to turn loose on the community to practice surgery. The eye doctor practices on the eye only, yet he must know enough to recognize the eye symptoms of such general diseases as syphilis, rheumatism, kidney and liver diseases, certain brain diseases and many other constitutional diseases. The stomach specialist could never recognize the diseases he proposes to treat and separate them from the diseases he does not propose to treat if he did not know anatomy, physiology, chemistry and any other subjects a knowledge of which the State law now requires of every one who wishes to treat the sick. If it is necessary for a person who wants to practice osteopathy or surgery or to treat the eye, to pass an examination showing that he has enough general and special education to diagnose the conditions he proposes to treat, it would be absurd to allow chiropractors *who assume the same responsibility* to set up their own standards of education and to define the practice of medicine to suit themselves. I cannot see how you expect the law to discriminate in favor of the chiropractors, by allowing them to pass upon their own qualifications, simply because they have some *special scheme* for treating diseases. If the law should give them this special privilege, then it should permit osteopaths to have their special board and their own standards, and the same with the physio-medics, the neuropaths, the quadropaths, the faith healers, and any other group of individuals who have some exclusive, special, cure-all system of treatment.

"The law is not designed to protect the public against certain *plans of treatment*. It is designed to protect the public against *ignorance* of those things upon which *any plan of treatment* must be based. If the law should give every group representing peculiar ideas as to treatment a right to license themselves, then there would be no sense in having any law at all.

"I am surprised that you should submit testimonials of cure as a reason for special legislation granting you a right to set up your own standards of education. You must be aware of the fact that there has never been any plan of treatment suggested since the world began that could not secure all the testimonials needed to prove its worth. All that a sick person knows is that he is sick today and well tomorrow, or that he is feeling very badly today and feeling better tomorrow. Every chronic invalid has periods when he thinks he

is getting well and many of the most discouraged sick people find themselves getting well *with or without treatment*. You must know that consumptives and cancer victims, for example, as well as all of the thousands of other chronic invalids, have periods when they are willing to sign statements that they are cured. If they happen to be taking *Peruna* during a period of improvement, *Peruna* cured them; if they are taking faith cure, faith cured them; if they are getting massage, massage cured them; if they are using electricity or chiropractic adjustments or anything else, then the particular thing they happen to be taking is given credit for having cured them. Testimonials prove nothing and the rule seems to be, the more numerous the testimonials the more flagrant the fraud. Testimonials from grateful patients are the stock-in-trade of fakers the world over, as you know, and I am, therefore, surprised that you should employ such means in trying to prove that you should be given special class legislation in your favor.

"It seems to me that you have missed the whole intent and purpose of the Texas law which, I repeat, is not to set up any standards of treatment or to discriminate against any plan or system of treatment, but to provide an *educational standard* which will make sure that ignorant persons are not allowed to assume the grave responsibility of caring for the sick."

REPLY TO AN OPTOMETRY LEGISLATIVE LETTER

The following reply to a letter addressed to members of the present Legislature and signed by W. B. Georgia, Chairman of the Ways and Means Committee of the Texas Optometrical Association, has been made by the legislative committee of the State Medical Association, on the advice of the optometry committee:

(1) It is urged that because all of the States in the Union, with the exception of Texas and Missouri, have optometry laws Texas should be equally as progressive and adopt a law such as the optometrists, so-called, will introduce in the present Legislature. The fact that all of the States except Texas and Missouri have such a law merely means that the medical profession is becoming weary of contending against the importunities of the optometrists and are assuming the position that the problem is a matter of more concern to the public than it is to the medical profession. In the States mentioned, the medical profession left the matter to the public, and as the public was not informed, the legislation was secured. While each State has a law, as alleged, in many of them, most notably Kentucky, to mention a State lately passing on the problem, the provision of the law are not entirely satisfactory to the optometrists. In Kentucky the State Board of Health, which is the State Board of Medical Examiners also, licenses the optometrists and does not permit them to pose in any manner, or to advertise themselves as eyesight spec-

ialists, or anything of the sort. The argument advanced by the optometrists in this connection gets nowhere in proving the justice of their claims for exemption from the present medical practice act, and for the control of the practice of refraction.

(2) The argument that there are 3,250 persons in this State engaged in the practice of optometry, and that 1,500,000 of our people patronize them, merely establishes the fact that the optometrists have been imposing upon the public in a manner and to an extent entirely unwarranted, and emphasizes the need of measures of suppression rather than encouragement. The truth of the matter is, there is no such thing as an optometrist; he is an optician or tradesman, who has infringed upon the practice of medicine to the extent that he practices refraction. He has advertised himself as an eyesight specialist, which he distinctly is not. The people have been misled by such publicity, and they would be still further misled by a law confirming the use of the word "Optometrist," and permitting them to refract the eye. The allegation that 98 per cent. of our people have optically abnormal eyes, and therefore need the services of the optometrist is, of course, ridiculous. If there are that many abnormal eyes, there are that many people needing the services of the ophthalmologist rather than the optometrist, the one being well versed in medicine and refraction and the other perhaps well versed in refraction but not so in medicine. The people now have all the protection they need and all the services of this character they require. The medical profession can be depended upon now as always, to care for the ills of the public, and there is no room and no demand for a special branch of medicine covering the art of refraction alone, with no requirements as to preliminary education in general medicine.

(3) There is little truth in the statement that optometry is a scientific profession, and that this alleged profession is recognized throughout the civilized world. It is not believed that the optometrist knows anything of value not taught to the physician who specializes in ophthalmology, and there are certainly many things known to the physician which he thus specializes not taught the optometrist. It is not necessary to protect the so-called profession of optometry in the same manner the profession of medicine is protected, for the reason that the profession of medicine covers every possible angle of the profession of optometry that should be protected. It might be advisable to protect the optician in his legitimate sphere of action, but there can be no possible excuse for further complicating the machinery in order that 3,250 people engaged in what we believe is at the present time an unlawful practice may be legalized in the same, and thus by law, if not by education, made into a learned profession.

(4) We do not believe the bill the optometrists will present is sound in principle, as alleged, or that it is a practical means of protecting the public. Should the legislature adopt the principle involved in

thus setting aside a portion of the practice of medicine and permitting illy prepared persons to enter the field under what would be tantamount to an exemption from the medical practice act, there is no reason why the chiropodists, to name one of a large number of such excrescences on the practice of medicine, should not be granted the privilege of fitting braces, arches and the like, on the legs and feet of those needing such service; and there is no telling where the line should be drawn, so long as medicines not used. Such a principle, practiced to any considerable extent, would eventually do away with scientific medicine, and the public would be the principal loser. The best of forthcoming generations will not enter the practice of medicine in the face of such unfair and unjust competition.

Please be assured that the medical profession has no disposition to fight the optometrists or any of the cults as such, and that we are not concerned as a body over the amount of refraction of simple, uncomplicated cases that the optician does. It is the complicated case and the case which has an intimate and serious connection with disease, that we are concerned about. We know of no way to protect the public in this particular, and would urge that until such a way has been found, no such legislation as requested by the optometrists be passed.—*T. S. of Med.*

DRUGGISTS PRAISE GET-TOGETHER MEETING

JOINT MEETING OF DRUGGISTS, DOCTORS AND DENTISTS
WAS NOTABLE AND INTERESTING EVENT

MARKS NEW DEPARTURE IN CO-OPERATION OF ALLIED PROFESSION ON MATTERS OF MUTUAL INTEREST

The only regret among the goodly company of C. R. D. A. members who attended the joint meeting of doctors, druggists and dentists Wednesday, February 23, was that more of their brother pharmacists could not have been present to enjoy the good fellowship of the three professions and the straight from the shoulder talks given by spokesmen of all the professions mentioned.

All the druggists present were unanimous in saying it was one of the best, most interesting and important meetings held in a long time.

The meeting which took place in the beautiful Grill Room of the Marshall Field Annex was preceded by a dinner at the University Club at which thirty of the leaders in local dentistry, pharmacy and medicine talked over mutual interests in more intimate fashion than could be done in the big open meeting which followed.

The dinner and meeting in turn were preceded by several conferences and committee meetings at which the officers of the C. R. D. A. came into more close and friendly relations with officers of the Chicago Medical and Dental Societies than is ordinarily pos-

sible. Mutual pledges of co-operation were tendered, which were ratified in the resolutions adopted following the meeting at the Grill Room.

Dr. Edward Oschner, who served as chairman of the joint meeting, deserves much credit for having started this whole movement. With him on the platform were our president, George V. Haering, and the presidents of the Chicago Medical and Dental Societies.

Dr. John J. A. O'Reilly, who came on from his home in Brooklyn, N. Y., was the first and principal speaker. He was forceful, clear and witty in his exposition of facts regarding compulsory health insurance and state domination of the various agencies of health. He told of the fight and resulting victory in opposing these measures in New York and New Jersey and surprised his hearers with his statements as to the power and standing of some of the various agencies back of these obnoxious measures which are liable to crop up in Illinois suddenly as they did in New York and other eastern states.

Compulsory Health Insurance, Dr. O'Reilly said, was put forward ostensibly for the good of the working people but actually as a means for their control. It would take a considerable per cent of every dollar earned and return a far smaller amount. While apparently only a fraction of the premium for this proposed insurance would be paid by the worker actually, though indirectly, he would have to pay all of it.

Doctors, druggists, dentists, nurses and hospitals would be the worst sufferers from compulsory health insurance on account of the entirely inadequate payment for their services in connection with the necessary administration of the law.

The New York doctor urged that it was the duty of the allied professions to warn the people so that they might act intelligently in the matter. The relations of doctors, druggists and dentists with the public are such that if they will they can readily mould public opinion and carry great political weight with the lawmakers who are the servants of the voters.

Secretary Samuel C. Henry of the N. A. R. D. added practical suggestions for co-operation and spoke in a way that did credit to himself and the great profession of pharmacy which he represents. He gave it as his opinion that seventy-five per cent of the legitimate pharmacy business of the country would be eliminated by legislation such as the proposed compulsory health insurance.

The final speaker was Don M. Gallie, one of the best-known dentists in the Middle West. He was brief but incisive. He said similar legislation in Germany and England had been a failure, practically pauperizing the professions involved and strangling their efficiency.

In the resolutions adopted opposing legislation of the type which had been outlined and pledging mutual support of the allied professions it was voted to include nurses and hospitals as well as doctors, druggists and dentists.—C. R. D. A. News, Feb. 26, 1921.

THE ADMINISTRATION OF ANESTHETICS IS THE PRACTICE OF MEDICINE

The following excerpt from the paper of Dr. Eleanor Seymour in the *California State Journal of Medicine*, October, 1920, is worthy of reproduction. We quote:

The activities of the local anaesthetic societies have been directed towards elevating this branch of medicine to a point beyond possible range of lay competition and the creation of sentiment, both public and professional, against the abuse. There has been secured, through the county units, the endorsement of a large majority of the membership in the State Society to the following resolution:

"Resolved, that the organization go on record as in favor of the limitation of the *regular* practice of anaesthesia to licensed physicians and dentists."

Unfortunately the average state law is no more specific in regard to anaesthesia than to other medical branches. However, in the opinion of numerous attorneys from New York to California, the medical practice act *does* cover anesthesia, for as the law now reads, "*any person who shall diagnose, treat, or prescribe for any disease or physical condition without a physician's certificate shall be guilty of misdemeanor.*"

To quote from an opinion rendered March 29, 1920, by Attorney Harry A. Encell, chief counsel for the California State Board of Medical Examiners, "One who is not licensed and who administers an anaesthetic, is subject to the penalties of Section 17 of the California Medical Practice Act, because one cannot administer an anaesthetic unless a diagnosis and treatment is performed. . . . In case of an operation it is necessary to administer more or less of the anaesthetic and in so doing the one who administers it is guided by his own diagnosis as to what amount should be given and when. The surgeon who is performing the operation is not always in a position to direct the administration, and, therefore, must rely upon the one giving the anaesthetic; hence the giver of the anaesthetic is violating Section 17 of the Medical Practice Act of this state."

The attorney for the American Medical Association has also rendered his opinion that the administration of anaesthetics is the practice of medicine.

The administration of general anaesthetic is the giving of the most powerful and dangerous drug at the most perilous time of the patient's life and an anaesthetist represents himself as being competent not only to diagnose conditions, but to administer emergency treatment should indications arise. A nurse is neither licensed nor permitted to order the preliminary opiate nor prescribe the stimulant and restoratives which may be indicated, although with strange inconsistency she may be allowed to administer an anaesthetic, the most powerful of drugs, and this for hours at a time.

An eighth grade certificate—for hospital entrance requirements have of necessity been lowered of late—and the meager medical and surgical training that a nurse receives does not qualify her to give anaes-

thetics, and the public is becoming aware of these facts.

The claim of the attending surgeon that he supervises the anaesthetic is usually a subterfuge, as most anaesthetics are begun in an adjoining room or at least during the time when the operator is occupied with his own preparations—and anaesthetic deaths are most frequent during the stage of induction. During the surgical procedure the operator cannot divide his attention and do justice to his work, and it would surely reflect unfavorably upon him, especially in case of surgical accident, should he admit a voluntary arrangement whereby his attention was diverted from the delicate operation in hand. Neither would it be to his credit to assume responsibility in case of anaesthetic accident, for no one can "live the rhythm of the anesthetic outside a radius of eighteen inches from the mask."

While many of the older surgeons are capable anesthetists, it is a fact that because so little attention is now being paid to instruction in anesthesia the majority of the young surgeons are not competent to supervise their anesthetists should it be even a possibility.

The fact that a few of the large eastern clinics, with unlimited material and opportunity for observation and *every safeguard* have developed nurse etherizers, is no argument for turning over anesthesia to nurses as a whole.

The few cases where a nurse is retained for her real worth are so exceptional as (to be negligible and impossible of consideration in establishing precedents. Moreover, nurses are insufficient in number, are limiting their hours and raising their prices and it is difficult if not impossible to secure the necessary attention for the sick. To take anesthetic work from an overcrowded profession to which it legitimately belongs and thrust it upon nurses whose services are so greatly needed in their own field, does not appeal to reason.

A nurse's quicker intuition, sympathy for her patient or concentration on her task cannot be charted or justified in court. There are women physician anesthetists and there are many more physicians, both men and women, who would gladly equip themselves for this dangerous and absolutely essential work should recognition and adequate financial recompense be assured. Honest persons will admit that it is the financial exploitation of the nurse which makes her chiefly valuable as an anesthetist. She is in most cases paid a modest salary and her anesthetic fees accrue to the hospital or surgeon employing her, at a profit which is a far greater menace to the profession than was fee splitting. There is the exceptional situation in which a nurse maintains an independent practice in anesthesia and in such case is unquestionably trespassing upon the practice of medicine.

Instances can be cited of eastern hospitals where medical anesthetists are absolutely barred and others where surgeons are terrorized into using the house technician, by threats of being dropped from the staff, while in some institutions the patient of a surgeon who employs a medical anesthetist must pay a like anes-

thetic fee to the hospital. As a result of these money-making schemes, competent anesthetists are being forced out and surgery itself is greatly hampered. The anesthetic service is not the proper place to make up a hospital deficit.

To claim a shortage of physicians is scarcely accurate as there is one physician to every 720 of the population of the United States and about one to 200 in the large cities where the anesthetic technician abuse is most common. The report of the Council on Medical Education of the A. M. A. is to the effect that "not greater numbers but better qualified physicians are needed." In a scattered population one anesthetist may take good care of several communities. As to a shortage of interne material, why should the anesthetic service alone be relegated to nurses? They become quite adept in minor surgery and obstetrics.

The work of the American Hospital Association and College of Surgeons, in their program for hospital standardization is in many respects highly commendable, but it is to be regretted that the officers in many instances have become exploiters of the nurse anesthetist, and where such is the case, anesthetic standards both within and without the profession are debased—as instance Ohio, the only state where nurses are in any sense legalized to give anesthetics, the death rate is in excess of one in every 500 administrations.

Contrast with this the record of the Royal Dental Hospital of London where 1,500,000 anesthetics have been given by a staff of seven medical anesthetists without a death. The United States has to her discredit proportionately more than three ether deaths to every one in England. There are no statistics covering post-operative anesthetic deaths and delayed recoveries, but it is interesting to note that the outstanding researches in post-operative acidosis have been conducted in a large Pennsylvania clinic where lay anesthetists are continuously furnishing abundant material.

A distinguished British surgeon in attendance at the recent A. M. A. meeting remarked with disgust, "Can it be possible that nurses are still permitted to give anesthetics in your country!"

... That the socialization of medicine on the basis of a nurse's salary has begun, and is rapidly extending to the various branches of the profession should give us pause. The profession and the public of the state of California overwhelmingly defeated compulsory health insurance, the greatest evil of which is contract practice. Lay technicians in anesthesia, X-ray and laboratory service introduce all the evils of contract practice.

This year the chiropractors are loudly acclaiming their rights and it is interesting to note that they are using the inconsistency of the regular school in allowing nurses to give anesthetics, to further their own legislative aims. This is a matter of far more than state-wide importance.

There is no intention on the part of anesthetic associations to exact the unreasonable and, by common

consent, non-operative obsetric work and emergencies of every kind are excepted. The surgeon has no quarrel with the layman who in emergency renders first aid, though unskilfully, to his injured fellow—it is the *regular* practice of his art to which he takes exception. So with the medical anesthetist.

Neither is there a desire to limit the administration of anesthetics to the specialist, for in a scattered population this task must fall to the lot of every physician. Their fundamental work lies in improving the quality of their own anesthesia and securing the establishment in medical schools and teaching hospitals of adequate student and post-graduate courses so that every physician will have some practical knowledge of this branch. As a result, scientific progress in the, as yet little known, field of anaesthesia will be assured, and the surgeon will more readily procure the better anaesthetic service to which he is entitled.

MUSCULAR TONUS AND FATIGUE

A series of tests to determine muscular tonus in relation to fatigue is described in the July 25th issue of Public Health Reports. The method used was that of determining at different times the amount of tension required to produce a given amount of extension of a group of muscles. It was found that in subjects doing relatively strenuous work or working over a long period, there was usually a decrease in tonus in the evening as compared with the morning condition. After lost rest the morning tonus was lower and the average tonus for the day was less than after a good night's sleep. Strenuous work of short duration was usually followed by an immediate decrease in tonus. Psychic stimulation seemed occasionally to produce an increase in tonus, although fatigue producing conditions were recorded in the history. In subjects doing relatively light work and obtaining plenty of sleep the tonus varied during the day, the evening tonus being frequently greater than that observed in the morning.

DELAYED POISONING BY ARSPHENAMIN^F

From the early days in which this comparatively new drug was used up to the present time, it has been increasingly evident that while its introduction into medicine is of the greatest possible importance from many points of view, nevertheless the physician who employs it is using a tool with an exceedingly sharp edge, and that very slight variations from the ordinary both in the constitution of the patient and in the constitution of the substance itself may give rise to distressing symptoms or even death. Herxheimer's reaction, as a rule, may be considered to be a moderate untoward effect.

The development of cerebral symptoms as represented by convulsions or coma may possibly be another manifestation of the so-called Herxheimer reaction, and no less an investigator than Ehrlich himself clearly pointed out that the too frequent administration of this drug often produced most dangerous manifestations, and that those who suffered from

marked cardiovascular-renal lesions were to be considered as in a class in which its employment must be most cautious.

Nearly all of the evil effects which have followed the administration of the so-called "606" have, however, taken place within a period of a few hours or at least within a day or two, although in all probability a very considerable number of cases have occurred in which evil manifestations due to the drug have appeared so long after its use that their occurrence has been attributed to other causes. So, too, a very considerable proportion of cases presenting evil effects, near or remote in time, have probably not been reported: first, because many men fail to make reports because they are busy or have no genius for writing, or because of the very human tendency not to record disagreeable occurrences. On the other hand, it is not to be forgotten that no other remedial substance has ever been administered to such a multitude of patients by such a multitude of practitioners, trained or untrained, within a given space of time as has the particular drug under discussion. Even the widespread employment of diphtheria antitoxin is insignificant as compared with the frequency with which arsphenamine and neoarsphenamine have been employed. It is also to be recalled that numerous manufacturers, because of the demand and because of the war, have produced these products without adequate control; and last of all, they have probably been largely used in many cases which were unsuited for their employment save that the physician believed that, amongst other things, his patient was infected by syphilis. When all these facts are considered, it is evident that any substance possessing power for good also may possess power for harm, and it is remarkable that so few disasters have followed its careless use.

Constantly increasing knowledge concerning these products in no way indicates that they should not be resorted to, but emphasizes the fact that if badly prepared by the manufacturer or by the physician about to inject them, they are capable of harm, particularly if some contraindication to their use exists.

A valuable paper bearing the title "Delayed Arsenical Poisoning" has recently appeared in the London *Lancet* by Strathey, Smith and Hannah. They record fifty-eight cases following the administration of what they call "606" preparations, and refer incidentally to numerous cases of poisoning which have been reported in and out of army and navy service during the past eighteen months.

One of the reasons, possibly, for the development of untoward effects has been the very natural desire of military and civilian physicians to stamp out the disease before it could gain any headway, and this has resulted in the so-called intensive treatment in which the doses were repeated with little interval between them and often associated with a very free administration of mercury. Eight of the cases reported by the authors to whom we have referred developed their symptoms suddenly and died within a few days. The

other fifty patients varied in the degree of their symptoms, the onset of which was gradual, and all left the hospital almost fully recovered. Amongst the fatal cases the greatest number of doses given was eleven, and the least four; and the greatest total amount administered was 6.95 gms. and the least amount 2.2 gms. It is to be noted that the average time of the onset of symptoms after the last dose was no less than 41 days; the longest interval 48 days, and the shortest 18 days. One patient was under twenty years of age, four in the third decade of life, and three between thirty and forty. The shortest time which elapsed between the onset of symptoms and death was two days, the greatest eleven days, and the average five days. The early symptoms were the development of jaundice followed by nausea, epigastric pain, stupor, delirium, and death, with albuminuria, stertorous breathing, and feeble circulation. Four of the patients were wildly delirious, but in the patients that lived for eleven days drowsiness came on slowly and slowly deepened into coma. Bile was present in the urine, but the hemoglobin and red blood cells were not much reduced.

Amongst the non-fatal cases it is interesting to note that the greatest number of doses given was 14, the least 2. It is also worthy of record that the average time of onset of symptoms was 45 days and the longest interval 180 days; the shortest interval being three days. Thirty-nine of these cases were admitted for jaundice, eight for dermatitis, two for nephritis, and one for general debility. Albuminuria was present in 28 and bile salts in the urine in 35. Jaundice seemed to be the most constant of all the symptoms.

In other instances peripheral neuritis developed.

It has been thought by some that the evil symptoms produced by these drugs are due to the benzol group, but Strathey, Smith and Hannah vehemently deny this and believe that the cases they reported are typical of delayed arsenical poison. They also feel that age and syphilis are not causative factors.

As to the collateral treatment, naturally this had little effect. The most important point seems to be to cut down the diet to a very strict limit to diminish the formation of toxic products from food. Their patients were given 30 ounces of skimmed milk and 2 ounces of sugar daily, which was gradually increased. The diet was intentionally high in carbohydrates and low in fats. Absolute rest was ordered and two drachms of sodium bicarbonate given in each 24 hours. Except in the fatal cases the vomiting ceased when a restricted diet was given.

These authors believe that this series of cases cannot be classed as belonging to an epidemic of infectious jaundice; in other words, they attribute the evil effects to the drug and not to an infection, but they emphasize the fact that in all their examinations the liver was found to be atrophic, and they claim that the atrophy of the liver can readily be recognized during life by the use of the x-rays.

It goes without saying that should any patient who has been receiving arsenical compounds develop jaundice, albuminuria, and marked shrinkage of the liver

within two or three months after the use of the drug, these remedies should not be re-employed.

Once more we wish to emphasize the fact that just as the development of anaphylaxis in rare cases should not in any way militate against the employment of diphtheria antitoxin in the presence of diphtheria, so should the very occasional occurrence of any of the evil conditions that we have mentioned in no way influence the physician to withhold these remedies in syphilis. They should serve only to make him study his patients most carefully before resorting to this method of treatment and lead him to watch with the greatest care the subsequent career of the patient treated.—*Therapeutic Gazette*, Oct., 1920.

FRAUDULENT DIVERSION OF WORKMEN'S COMPENSATION FEES BY DISPENSARIES

The following editorial from the November, 1920, issue of the Long Island Medical Journal we reproduce for the information of the doctors generally and as showing a misuse of fees paid out under the workmen's compensation laws.

The State Board of Charities which has jurisdiction over dispensaries throughout the state (New York) has had brought to its attention a state of affairs that has impelled organized complaints on the part of a number of physicians. These physicians complain that contracts, or at least understandings, have been entered into between insurance companies dealing with workmen's compensation and the management of certain dispensaries whereby injured workmen are treated gratis by the medical staff of the dispensaries and the insurance is collected by the dispensaries to the detriment of the physicians. They claim that such action is forbidden by law and that the case is covered by Rule III of the State Board of Charities which is as follows:

III. THE ADMISSION OF APPLICANTS

"All persons applying for advice or treatment at the dispensary shall be interviewed by the registrar or his assistant to determine the question of their admission, and the disposition of each case shall be governed by the following:

(a) All emergency cases shall be admitted and receive prompt treatment and care.

(b) Applicants belonging in the following classes may be admitted in the discretion of the registrar:

1. Patients who are received in dispensaries connected with medical colleges and are selected for use in clinical instruction.

2. Patients admitted for the treatment of communicable diseases.

Other applicants shall be questioned as to their ability to pay a physician for his services and there shall be admitted as patients only those who are in the opinion of the registrar unable to pay a physician or dentist for the treatment required. When neces-

sary for the proper determination of the case, the registrar shall cause an investigation to be made into the financial status of the applicant, and the result of such investigation shall be filed among the permanent records of the dispensary. A record shall be kept of the names and addresses of patients refused treatment under the provisions of this rule."

At a conference between a committee of the State Board of Charities, representatives of the insurance companies, superintendents of a number of dispensaries and representatives of the complaining physicians on October 28, the matter was generally discussed. It was of decided interest to compare the mental attitude of the various representatives. The point of view was as divergent as the interest represented. The insurance companies, through their representatives, maintained that their one care was to obtain the best form of prompt treatment for their injured insured. They stated that all physicians were not qualified to care for such cases; that the nature of the work demanded special experience and equipment; that the ordinary family physician was not always available, was not versed in Compensation requirements, and often did not have the proper surgical training or the needful office equipment; and that they had developed a corps of trained specialists conveniently located to meet the demands of the most exacting surgery. Furthermore, they claimed to have found far better surgical results since these specially trained surgeons had been doing all the compensation work. Their solicitous interest in the poor working man was most touching. Later, in discussion, they denied that contracts had been entered into with dispensaries, but ventured the opinion that a well-equipped dispensary offered advantages for an injured man that might make it worth while to establish a definite relationship.

The superintendents of several of the large dispensaries openly acknowledged that they regularly accepted compensation cases for treatment in their clinics, charging two dollars for a first and one dollar for subsequent treatments. One of them defended this as entirely legal on the ground that he regarded them as a special class of hospital patients treated in the out-patient department of the hospital. He did not make it clear whether the money collected from the insurance was retained by the dispensary, or divided with the medical staff. One institution permitted its staff to treat such cases outside, under certain conditions, but retained the first fee to cover the expense of dressings. None of them showed much interest in the physicians of their staff, unless it was the one which divided a part of the receipts pro rata among the staff, but all claimed that they did not think they were breaking the law, and if they were, that the law should be changed. The expense of keeping dispensaries running was emphasized and the important thing seemed to be to pay the bills, and let the medical men get what they could. At least that was the impression gained as one listened. Those connected with teaching institutions are in a different position, as the law permits them to accept for treatment such cases

as are suitable for teaching purposes, irrespective of whether or not they can pay. All seemed to feel that the actual number of patients who received dispensary care to which they are not entitled is small—about four per cent., according to Dr. Corwin.

The physicians present insisted that, despite denials, it could be shown that working agreements existed between certain dispensaries and insurance companies; that this was illegal; that it worked harm to the profession; that not only was a certain unjust discrimination caused thereby, but that the actual money loss, while small in individual fees, was considerable in the aggregate. They pointed out the absurdity of regarding the surgeon as a trained specialist while he is in the dispensary, but as an unqualified family practitioner in his own office. The same man filled both positions. Why is he not equally efficient, wherever he may be? They asked why the dispensary should receive pay for work done by physicians who received no pay?

Some of the points that no one seemed willing to bring out were the purely commercial aspects of the insurance side of the question. It seems insincere to hide the fact that the schedule of fees, which is notoriously inadequate, must be subscribed to before a physician can expect to obtain compensation work; that this has kept the better element of the profession from accepting such work; that it is cheaper to have compensation cases treated by dispensaries; and that the prime object of insurance companies is to turn out a generous profit for the stockholders. In the nature of things they are treading on thin ice when they emphasize the welfare work and make too much of the high quality of their medical employees. On the other hand, it is not well for physicians to assume too lofty a virtue in discussing their relations with the dispensary problem. There is a definite return in experience, reputation and in money that makes it worth while to do dispensary work; and now that many dispensaries are broadening their horizon and developing the diagnostic side of the work, a dispensary position carries opportunities for study and self-improvement that largely compensate for the drudgery and unpaid time. Naturally one feels it an imposition to see the institution pocket fees that it has not earned, and resentment at a commercial bargain that saves money for the insurance company is not to be wondered at. But if one is able to improve his own standing, broaden his experience and improve his technic while he gives really skilled care to an injured man, he should temper his resentment somewhat and cast about for a plan whereby the palpable injustice may be done away with, at the same time that the injured workman may receive a better class of professional care.

Considering all sides of the question, it seems that the trend of modern institutional work is to provide opportunities in a more generous spirit for all classes of society. This is shown in the pay clinics already established, in the addition of welfare departments, in the more general use of the maternity wards of gen-

eral as well as special hospitals and in the reorganization of old-established dispensaries as hospital departments where the ambulatory cases may get the benefit of the same teamwork that characterizes the in-patient care. This the physician is bound to recognize. The time when a few hurried questions and a prescription for a bottle of stock cough mixture made up the whole of the average diagnosis and treatment has gone by. Therefor the physician must study how to keep in the van of progress at the same time that he guards himself from commercial imposition. It might be worth while to abrogate entirely the arbitrary definition of what constitutes a charity patient—it now is the inability to pay more than ten cents for a dispensary visit—and accept all out-patient applicants on a graded fee schedule while the dispensary physician receives a salary. Such a plan has been tried. It has its weaknesses, but it seems susceptible of adjustment until it may be made to meet the needs of profession and public alike. The subject is too big a one to develop editorially, but as one listened to what was said at the conference, it became increasingly apparent that there was something in each point of view that demands recognition and reconciliation. Simply because an injured workman who is taken to a dispensary is a compensation case is no reason for refusing him treatment. This is recognized and emergent treatment is provided for in the law. But shall he, of necessity, be refused further treatments? Must he be referred to some outside physician who, even though he is an insurance doctor, may not be a qualified surgeon? On the other hand, shall the dispensary pocket a fee for its surgical supplies while the surgeon does the work gratis? And shall the insurance company profit by getting the highest grade of surgery at an inadequate fee at the same time that the responsibility for the outcome is transferred from its shoulders to those of the institution? These are questions of greater moment than the simple one of showing that the law as it now stands is either openly violated or deftly evaded. There must be a readjustment of all three parties to meet the situation and the suggestion of a graded pay clinic, carefully controlled, with an efficient investigating department to check up on the inevitable unworthy applicant, seems to offer a means to meet the just claims of all parties—patient, doctor, dispensary and insurance company—*H. G. W.*

FABLE FOR THE KANSAS DOCTOR

By RENNIG ADE

Once upon a time a Kansas doctor decided to spend his vacation down in the Ozarks. Previous years he had gone to the Rockies. He was convinced that this was the logical thing to do, and the circulars he had been receiving all the hot summer from the cool recesses of that piscatorial paradise cinched the deal. He strained at the leash of professional duties day by day, until finally the weakened strains parted and he was off.

The aforesaid circulars depicted a cool, shady recess

with precipitous banks, and magnificent trees with dense overhanging foliage. Standing in a boat could be seen a bucolic individual with a lopsided straw hat over-topping a head of questionable intelligence. But most important, in the outstretched hands of this individual, and extending from McBurney's point to the metatarso-phalangeal articulation, was a string of black bass about fifteen in number. Every expression of the angler would indicate he had caught these fish and that fishin' was tolerable that afternoon. The deduction would naturally be that if a gink of this physiognomy and an old willow pole could get a string of bass of this number, what might not be the possibilities of a medical man equipped with expensive rod and reel and bait delicacies that modern bass crave?

In company with two friends—and the latter term is used advisedly—and their families tucked away in large touring cars among suit-cases, fishing equipment, folding cots, shovels, tents, hot-water bottles, ice-bags, palm-beach clothing, foot warmers, and anything else that was not nailed down at home, they sallied forth at 7 a. m. one bright September morn, for the Ozarks, 500 miles away.

The down trip was uneventful, barring the fact that the cork came out of a bottle that had been carefully treasured for the occasion, and the contents thoroughly incorporated with some special clothes that the ladies had packed in the same suit-case. After considerable parley and exchange of cutting remarks, and as the end of the trip was only a few hours' drive, it was decided to go on in spite of the loss of the bottle.

As they neared their destination and inquired regarding the fishing, reports were most favorable. Nearly every one told of the big cat-fish that were being caught on trot-lines. The doctor and his friends smiled patronizingly and patiently explained they were not looking for cat-fish and trot-line fishing, but were there prepared to snare the wary bass. To substantiate this, artificial wobblers, craw-dads, minnows, and bottles of long pieces of pork were exhibited to the astonished natives. The last word of advice, however, given by the old settlers, was "to bait with liver or worms and run the lines at 10 p. m. and also at daylight on account of the turtles."

Camp was made on the banks of a beautiful stream from which is sent out each year one million dollars worth of propaganda to entice the credulous fishermen.

They learned that the fishing had been good the week before they arrived, and all indications pointed to it being good the week after they left—if they stayed long enough. This is a fishing axiom from which there is no variation, and holds good in the Ozarks as well as in the Rockies. Fishing demoralizes. Men of severe truthfulness in business matters will glance around to see if the children are listening, then lower their voices and without the flicker of an eyelash unburden themselves of a personal fishing experience that would make Ananias turn green. When

one of the natives shows an aptitude far above the ordinary in this line, he is made a guide, and is now harmless as no one ever believes him. Nor does this affect the general disposition of the latter, for the democracy of his nature permits him to drink with equal condescension the 20-year bonded product of the rich barber from Joplin and the diluted "mule" of the obscure Kansas City banker.

For the first three or four days the Doctor and his two co-fishermen threw every kind of temptation across, over, under and through the muddy water, but never did a bass vouchsafe a look of curiosity let alone interest. Night after night they met at the cabin with stony stares, and after the humble meal was served proceeded to back a pair of fives or four clubs and a diamond with vicious disregard of gentlemanly proprieties. The children kept out of the way, and the wives prepared the ration in a reconciled "I thought so" manner.

The crisis came when the "Judge" was heard to casually inquire "where could a man find some worms?" This opening justified the doctor in announcing he was going to town four miles away to get a shave. In reality he went after liver. Liver for cat-fish. Liver to put on a trot-line at night, and to go out the next morning at daylight with eager eye and buoyant stride hoping it has been swallowed by a nice big slimy mud-cat that has been feeding all season on a dead horse around the bend. Did they scorn the cat-fish? They did not. They ate every one they could get hold of. They baked them and fried them and made soup of the bones. By handling different kinds of diseased and deceased tid-bits that cat-fish relish, they soon began to smell like a Cape Cod whale cannery, and refused to eat at the same table or play the great American game with each other. But they grew strong, slept soundly, and in their avid pursuit of the torpid mud-cat became almost as adept as the native angler.

The expensive six-hook wobblers were packed away as being too dangerous to use anywhere but on the ocean. This conclusion was reached one afternoon when the most muscular of the doctor's companions, in attempting a hundred-foot cast, succeeded in burying an artificial craw-dad with eight hooks and weighing one-fourth pound in the doctor's fourth intercostal space. The unlucky caster was forced to listen to a brief dissertation on the folly of the law that permitted oxen to indulge in the sports of gentlemen, and incidentally was consigned to a place where he might safely go without his foot-warmer.

This and the tragedy of the ill-fitting cork were about the only casualties of the trip. The return journey was made without incident, the whole party voting it a most enjoyable outing; the real thrill, however, being the first sight of the stand-pipe of the old home town.

Moral—Not all the fish are in the water.—*Kansas Medical Journal*.

HAS MEDICAL ETHICS BECOME OBSOLETE?

FRANK B. WARNOCK, M. D.

SIoux CITY, IOWA

In this short screed, I am not going out muck-raking, nor have I a chip on my shoulder. I have no feeling of animosity towards anyone. Call me a reactionary if you will, that will not take from, nor add to, any of the truths hidden in what I may say. I am going to take right and justice into consideration, to the end that we may not be so cloyed with self interests.

For almost two score years I have played an active part in the practice of medicine. Any alluring ambition I may have had, to get a place in the Sun, has long since vanished and I no longer have any great desire to appear in the spotlight.

From observation and contact, I have become somewhat familiar with the ticklish technic of the game. Many times, in the mists and morass of uncertainty, have I blundered, and I confess my many transgressions. However, I have never formed an alliance with any clique, nor used any propaganda for gain or glory, nor have I any detached memory of ever trying to knock the underpinning out from under a reputable competitor.

And now, in my modest way, I am going to take it upon myself to wield the "velvet hammer" on some of the glaring corroded spots that are eating into the heart of the medical profession of today. They have become so obvious that even the laity are taking notice.

For a long time I have cherished the hope that more of the big lights of the medical men, the real celebrities, those who have reached the pinnacle, would get so big, that they might rise above their ostentatiousness and come down from the clouds, down into the lower atmosphere, disseminating a more congenial, friendly feeling among the "just-folks" kind of doctors, the kind we meet and rub shoulders with every day, the brainy, hard-working fellows who have had to paddle their own canoe without a pull. But, so far, I have hoped in vain. Along the road that I have traveled I have failed to see the "Blue-Bird" of equality perched on the banner of the profession; on the contrary, I have noticed a lack of the true basic principles of fairness in the dealings of one with another.

Leaders and Ethics

In every well regulated organization we have to have leadership, a code of ethics, and a constitution. The merit of leadership should depend upon qualification and integrity and not upon cheap propaganda and reckless egotism. A leader should cooperate for the good of all and be influenced by motives higher than the lure of self-aggrandizement and the lust for publicity.

As we come in contact with the methods of the present day, one is almost impelled to think that

the medical profession has adopted a new code of ethics and a new constitution, where every man is a law unto himself, ignoring the rights and feelings of the other fellow. This is fully understood by the public and, in case of sickness, they do not hesitate to call in another doctor (usually on the advice of some overzealous friend of the family who has some pet doctor they want to favor), and they have no trouble whatever in getting another doctor to step right in and take the case regardless of the propriety of calling on a patient in the absence of the attending physician.

I am not alluding to the charlatans, the barnacles of the profession, nor to those who have obtained a foothold among the fraternity, too often, more from pull than merit. From that class we expect nothing but bombastic egotism. I have in mind qualified physicians who are apart from the man that wants to play the game fairly. They have a malicious desire to belittle and cheapen a competitor without compunction. They very seldom turn down a call regardless of whose patient it may be, and in their subtle way give the attending physician the gaff in the solar-plexus when he is not present to defend himself. In the kindness and magnanimity of their great souls, they will say, "Well, of course, I would not imply that the doctor is not doing all he can for the patient, but, it occurs to me that he does not quite understand the case. I think we had better take her to the hospital, where we can give her better service and keep her under observation for a few days." Then, away goes your patient to swell the hospital records of the high-brow, while you are barred from the hospital and left to hold the sack. If by chance you should meet this physician in the course of a day or so, with sweet complacency he will grasp your hand and console your outraged sensibilities by saying, "Well, doctor, your patient that I took to the hospital the other day is getting along finely; she will be able to go home in a day or two."

MISDEEDS OF SPECIALISTS

It may not be remiss, while we are about it, to give some of our specialists a gentle tap. Do not misunderstand me; I have no quarrel with those who are too highminded, honorable men to stoop to do a disreputable thing, but who are doing great good in their special work.

Some time ago I had under my care a very intelligent lady who was suffering from diabetes mellitus. As she had developed some stomach trouble, I referred her to a stomach specialist of some repute to have her stomach looked after, calling his attention specifically to her diabetic trouble. It was some three weeks before I heard from her again, then one day she called at my office. "Doctor," she said, "I don't want you to send me to any more specialists; I am willing to die if I must, but I don't want to be tortured to death."

The stomach man, after doing his part, had

turned her over to a confrere of his who, he told her, was an expert on diabetes. He got in his work and, in turn, passed her on, until four wise heads had all done their stunts. Finally, of her own volition, she got away from the ring and returned to me. They had taken her blood-pressure, x-rayed her, cystoscoped her, telescoped (?) her, taken a Wassermann had her teeth all extracted, analyzed her secretions and tissues. In fact, every device and method known to science had been used by these very scientific (?) men to adroitly relieve this poor woman of her hard-earned money, and that, in fact, was all that they did relieve her of.

Ye gods! Is it not time that the honorable, hard-working practitioner stood up on his hind legs and cried for relief from the rapacious specialists and the overzealous hospital geniuses?

BLATANT EGOTISM

Egoism is the banner which another brand of our would-be superlative doctors are marching. They strut around like "bell-wethers" posing as the intellectual lights of the profession. Usually they have a coterie of henchmen or smaller satellites worshipping at their shrine, who are very complaint to their every beck and call. With the air of a potentate, they jolly the poor fellows to a frazzle and make them feel the essentiality of their friendship and council, using them as a sort of shuttlecock, or feeder, to augment their hospital practice. The go-between doctor may be just as competent and even more so than the man who is using him as a cat's paw; however, he is diffident and kept down by the men higher up who think that they have a superior right because they are higher up, regardless of what strings they may have pulled to obtain that position, or what means they are using to hold it.

These men may be competent physicians. Very often they are not. They simply capitalize their "gall." And they get away with it.

THE CLOSED-HOSPITAL EVIL

Let a physician, no matter what his qualifications are, try to get a private patient into some of the so-called public hospitals and see what happens. If he has not reached the glittering heights of being on the hospital staff, he is told, in the majority of cases, with dignified pomposity: "We are very sorry, but there is not a vacant room available," and the hospital is closed to him, although there may be a dozen empty rooms in the building.

This is not fiction. It is the kind of courtesy that is being extended many reputable physicians. Is it not deplorable that a few men can band themselves together and form a combination to monopolize the public hospitals? Is it any wonder that there are so many reactionary physicians today. It is very patent that this kind of thing will be a great impediment to all attempts looking to harmonizing the profession.

COURTESY AND DIGNITY

It is a sad reflection that there is such a lack of continuity and professional courtesy among the physicians of this generation. The old school of practitioners were more altruistic. They got by with dignity to the profession. Their code of moral philosophy taught tolerance; they had charity for all, and gave every one a chance to live and let live. They were not thought the less worthy because they did not make a display of their adroitness and they did not have a tithe of the friction and petty jealousy that exists among the medical fraternity of today.

In the great onpush of the profession in this twentieth century, too often, I think, we become obsessed in our blind surging and scrambling for publicity. In the lure of our great desire for praise and power we think only of the first person singular; we lose the gentle touch of tolerance; the spirit of fairness is forgotten.

The hope that never dies tells us that there is going to be a turn in the road pretty soon. The hand-writing is on the wall. There is a far cry for equality and fairness coming from the middle men. The "Stars" may flock together, but, class distinction must be eliminated. The general practitioner is coming back to his own, he is going to be something more than just a shuttlecock, a henchman, if you please, between the public and the man higher up; more than a feeder for the pseudo-specialist. He will not complacently send his patients to an institution controlled by a clearing-house ring, where they will not admit his private cases because he is not on the hospital staff. He will divert his business to a hospital where he will receive the same courtesy and have equal rights and privileges as the hospital geniuses.

We can not get away from the fact that a public hospital is a fundamental necessity, and that a well-equipped hospital is the only place where a certain class of cases can get adequate care and treatment. If the patients are able and willing to pay for the service why should they not have the right to say who shall administer to them? And, if right and justice prevail, they are going to have that privilege.

—Clinical Medicine, Nov., 1920.

Correspondence

HEALTH CENTERS THE ENTERING
WEDGE FOR STATE MEDICINE.
THE NEW YORK OUTLOOK

New York,

February 22, 1921.

To the Editor: Having side-tracked Compulsory Health Insurance, "under that title," we are now up against another scheme which is in my opinion an entering wedge for the re-

introduction of the same bill into the legislature this year—I refer to the Health Centers Bill, published with comments in the ILLINOIS MEDICAL JOURNAL, September, 1920, page 267. This seems to be a method of quieting the objections of the voters in the rural districts against a variety of class legislation in favor of the industrial elements of the cities by giving them a sop in order that they will not be against the new Compulsory Health Insurance Bill. Our County Medical Society had a meeting given up to it and kindred subjects on December 20, 1920. The papers read at this meeting were published in the *New York State Journal of Medicine* in January and republished in the ILLINOIS MEDICAL JOURNAL of this year. Inasmuch as some such bill will undoubtedly also be introduced into the Illinois legislature it is, of course, of considerable interest to the profession of your State also.

E. V. D.

THE ENTERING WEDGE FOR THE
STATE TO TAKE OVER OBSTETRIC
PRACTICE. PROPOSED DRASTIC
MATERNITY LEGISLATION
IN MASSACHUSETTS

ANYBODY, NO MATTER WHAT THEIR CONDITION
IN LIFE, WOULD BE ELIGIBLE TO THIS
MATERNITY BENEFIT.

PATERNALISM AND MATERNALISM RUNNING
WILD.

Somerville, Mass., February 7, 1921.

To the Editor: At the last session of the Massachusetts Legislature, two Maternity Bills were introduced. One provided a cash benefit to expectant mothers; the other did not provide any cash bonus but gave to all applicants who might register their application with the State Department of Health asking for maternity benefits, free obstetric service. Anybody, no matter what their condition in life, would be eligible for this maternity benefit, so that you see the last bill was very comprehensive in its scope. Both bills were defeated. On the last day of the session of the Legislature a resolution was introduced and passed appointing a commission to investigate the question of prenatal and post-

natal aid and care for mothers and their children. This commission was ordered to report not later than November 15 to the special session of this Legislature such findings as they might recommend. I will send you under different cover a report of this special commission which recommends a nursing bill under the direct supervision of the State Department of Health. In Massachusetts the profession do not take kindly to any supervision of any department of the practice of medicine by a state commission. Some of us think it is only an entering wedge for the State to take over obstetric practice.

At a meeting of our committee on State Legislation, Jan. 21, 1921, which is made up of members of the Massachusetts Medical Society and the Massachusetts Homeopathic Medical Society, together with an auxiliary membership made up of one member from each Senatorial district in the State: It was voted to postpone for a year any support of the recommendations of the special commission to investigate maternity benefits. On February 2, at a stated meeting of the Council of the Massachusetts Medical Society, a motion was offered asking for the approval and support of the recommendation of the special commission to investigate maternity benefits. This approval was refused by a vote of almost two to one. This is the condition so far. The report of the special commission will be referred to the Committee on Public Health and within a few days a hearing will be held. At that hearing we feel confident that a strong opposition will appear against any State Supervised Maternity or Nursing Bill.

Also at the meeting of the Council a resolution was passed calling for the appointment of a committee of seven to investigate the present status of maternal deaths and infant mortality in Massachusetts. This committee of seven will report from time to time the result of their efforts to the Massachusetts Medical Society.

Charles E. Mongan, M. D.

DISPENSARY TREATMENTS COST \$7.40 EACH. THE AWFUL WASTE IN WELFARE WORK.

Milwaukee, Wis., February 14, 1921.

To the Editor: It may interest you to learn that the Milwaukee County Medical Society at

its last meeting appropriated \$1,000 for work along the line of investigating the cost of public welfare work, and for purposes of education and propaganda in defending the privileges of the medical profession in this State.

We are now on the move to get business men and commercial organization to take part in this investigation of "the waste in welfare work."

It was recently shown that for every treatment of a patient in our County Dispensary the cost was \$7.40. What do you think of that?

H. M. Brown, M. D.

Note: Contrast the above with the cost of much more efficient and trustworthy medical service under private supervision. For instance, the Standard Oil Company of Indiana has thousands of employees. To the writer's personal knowledge this concern has as its chief surgeon one of the best medical men in Chicago, maintains a most elaborate equipment, purchases the best of medical supplies, pays liberal wages, hires the most efficient nurses, makes no attempt to curtail expenses in rendering first and subsequent aid to its injured. This company is giving a service of far superior quality to that given in any dispensary in America and at a cost of less than 60 cents per visit.

AN EIGHTY-SIX YEAR OLD BOY

WITH A KEENER KNOWLEDGE OF PRESENT DAY
MEDICAL AFFAIRS THAN SIXTY PER CENT
OF THE YOUNGER MEMBERS OF
THE PROFESSION

SANE MEDICAL LEGISLATION NEEDED

JAMES L. REAT, M. D.,
TUSCOLA, ILL.

The existence of "Guilds" reaches far back into Roman history and beyond, the object of their formation being mutual aid and promotion in the several pursuits of their members.

In evidence of the success of these confraternities, as they were sometimes called, we find them (or similar organizations) of men, established in various parts of the United States and elsewhere—many of them engaged in a prosperous and constructive work—guarding the interest of their membership.

Now that the medical profession is menaced with Health Centers, State Medicine, National Socialization of Medicine and Compulsory Health Insurance laws—*nolens volens*—none of which could possibly benefit the great body of physicians barring a few of the elect—a solemn declaration expressive of opposition to such legislation, should not be considered irrelevant.

Legal enactment causing such radical innovation would inevitably lower the dignity, lessen the social standing and curtail the financial income of a large number of practitioners.

Granting that the mistaken theorists who are sponsors for the proposed laws are actuated by humane and altruistic motives; practical application of such fundamental changes, as is contemplated in these measures, would prove so disastrous to the welfare of so large a number of physicians that many of them would be reduced to penury or forced into other vocations.

The father of American medicine, as the celebrated Benjamin Rush has been called, said "It would be to dishonor human genius to name the many defects which exist in the best" system of legislation.

If this is true of the *best*, nothing as good can be expected from the ordinary political legislation in force at present.

Some palliation may be granted to our lawmakers when the meaning of laws is obscure or when they conflict and neutralize each other, because the objects sought were not definitely and clearly known to the authors.

Now if physicians will unite in a compact body like an old Greek phalanx, standing shoulder to shoulder—they can prevent vicious or unfriendly legislation and secure for themselves and others, laws that are just—without any special legislation.

But there must be a thorough organization—not a zig zag or disconnected one—embracing the entire profession in order to secure harmony and mutual aid.

By way of discipline as a basis to secure permanent improvement there should be an efficient internal organization, embracing all reputable physicians of the State, even if it requires an office to office canvass.

This will require some time and incur considerable expense, yet it can be accomplished

and must be if we would avert the discriminating effort of a "Compulsory Health Law."

But aside from what may be secured by legal enactment, whatever is done to conserve the interest of the profession must be done by itself, its honor, its social welfare, its usefulness are in its own keeping and depend on its own action. What is essential to success is an internal aggressive effort.

This is the strategic and opportune time, associated action has come to be the great feature of the present age. Without this, a statute book full of laws would be of no avail and with it laws would be relatively superfluous.

Aggressiveness on the part of a few good medical men has accomplished something, but mental and moral inertness have been characteristic of the larger portion of the profession.

Hence we have laws today that permit certain pseudo-Sciolists, Chiopractors, Christian Scientists and like cults to treat both epidemic and infectious diseases without making reports of their cases, while holding regular practitioners amenable to the onerous mandate and penalizing them if they fail to comply with a discriminating rule of action.

Letting those who disdain even the fundamental principles of medical science, ignore sanitary inspection, laboratory analysis and proclaim from the house top by their arrogance, egotism and deceit: "that all matter is simply thought," "Nothing exists in substance" and other irrational dogmas go Scot-free.

"If proposal No. 300" or its equivalent could be enacted into law it would be in the interest of all the people and help to guard the welfare of the sick, but the self styled scientists and their neophytes, apprehending that their "craft" would be in danger "for by it they gained their wealth," arrayed themselves against a plan, by which the interests of helpless children and disabled adults, could be legally guarded—disdainful of all the ethics involved. Why cannot this wrong be righted?

Better that the entire system of "Health Laws" be abrogated than that these invidious distinctions be continued.

The new state constitution is not yet adopted. Other objectionable features will be found, different interests jeopardized—allies can be secured against it.

A comprehensive intense campaign will be required but success can be secured by an earnest united effort.

“Who will take the initiative?”

NOTE—The above came to us for publication accompanied by the following letter: Tuscola, Ill., February 22, 1921. *To the Editor*—Although I have passed my 86th natal day I have not lost interest in my profession. I have practiced here since 1859 except four years during the Civil War I was surgeon of the 21st Regiment Illinois Volunteers. I am sending you my protest. It explains my convictions relative to our legal status. If you think it worthy publish it.

Public Health

EPIDEMIC POLIOMYELITIS IN ILLINOIS

In calling the attention of physicians to the present situation concerning epidemic of poliomyelitis, the Division of Child Hygiene and Public Health Nursing of the State Department of Public Health, points out that in spite of the meager publicity given to this disease during recent years, infantile paralysis is still present in epidemic form in Illinois. Cases have been reported to the Department during the past five years as follows:

Year	Cases Reported	Death Rate
1916	756	12.4%
1917	832	12.5%
1918	345	30.7%
1919	168	7.7%
1920	168	13.9%

While the cases reported would indicate that the situation is now at low ebb, still the service of the Division of Child Hygiene and Public Health Nursing for the after-care of victims of poliomyelitis, is convinced that about one case in three is recognized and reported. In all the twenty-three clinics now maintained by the Division, unrecognized cases are constantly presented.

Observers are of the conviction that epidemic poliomyelitis occurs in cycles, and that we are now in the midst of such a cycle. The number of years in which the disease may still reach epidemic proportions cannot be foretold. Lovett warns us that we are still to see our greatest incidence in the present cycle.

All precautions now taken are certainly justified. The most hopeful outlook at present is the success of early after-care in minimizing the effects of this crippling disease.

The clinics of the Division of Child Hygiene and Public Health Nursing are of the biggest importance to assist in this particular. They are already established in twenty-three cities and others will be established as facilities are developed.

At the present time it is felt that any physician in

the State may reach one of these clinics if he wishes assistance in the after-care of his patients.

INCREASED HEALTH SERVICE IN 1920

The semi-annual reports of the various divisions of the State Department of Public Health show substantial increases in practically every line of service administered by the Department. Of especial interest is the remarkable increase in the diagnostic service rendered by the Laboratories. For the six months' period ending December 31, 1920, there were 25,588 specimens examined. This represents practically double the volume of diagnostic work done by the State Laboratories during the same period of last year, and more than four times that of any former corresponding period.

The recent annual report of the health officer at Evanston shows that the city has taken over the infant welfare work in that municipality. The report calls attention to the increased popularity of the several infant welfare stations and indicates that plans have been completed for the establishment of a modern prenatal clinic in connection with the local hospital.

During the past year Moline has established public clinics for the removal of tonsils and adenoids and for tuberculosis. These are in addition to infant and child welfare clinics formerly established. All of these clinics are housed under one roof and represent one of the most efficient public health centers in the country.

The U. S. Civil Service Commission announces open competitive examinations for the following positions:

	Salary
Senior Assistant Physician.....	\$2,500 to \$3,500
Assistant Physician	2,000 to 2,500
Junior Assistant Physician.....	1,500 to 1,800

In addition to the stated salaries for these positions maintenance allowances are provided that range from \$480 to \$780 per annum, and a bonus of \$20 a month for positions that offer a salary of \$2,500 or less.

Receipt of applications will close March 22, 1921.

Physicians interested in these positions should communicate with the U. S. Civil Service Commission, Washington, D. C.

OHIO ECLECTICS AGAINST SOCIALIZED MEDICINE

The doctor's rights to life, liberty and the pursuit of happiness seem to be not altogether inalienable. It is not a very alluring picture that confronts the physician. Annual tax in some States, in others it is called annual license; the license for using narcotics and the maze of red tape surrounding its purchase and use; the burden of the prohibition bill; the reporting of births, infectious diseases, etc. With the constant addition to his clerical work, he will soon be as burdened with paper work as an army surgeon, and to cap the climax the emoluments will be abridged by free dispensaries of every description, with an army of State-paid employes supported at the expense of the physician.

"We, the committee, to whom was referred the report of the President, submit the following:

"*Resolved*, That we, the Ohio State Eclectic Medical Association, view with alarm the constant tendency of the State of Ohio toward socialistic and paternalistic legislation, and especially do we regard the health insurance and State medicine legislation as inimical to the interests and welfare of the profession and we therefore place ourselves on record as being opposed to the same."

Society Proceedings

ADAMS COUNTY

Annual Meeting

The annual meeting was held on December 20, 1920, and was very well attended. Dr. Arthur H. Bitter was elected to membership, and the application of Dr. Hildegard Germann was read and turned over to the Board of Censors. Dr. White, of the United States Public Health Service, was present on this occasion and gave a talk illustrated with films on "The Diagnosis and Treatment of Syphilis."

The reports of the secretary and treasurer for the past year were read and placed on file. The funds of the society being very low, the dues were raised to \$8.00 by a motion which prevailed.

It was decided to have the annual banquet on the regular meeting night in January, and the matter was placed in the hands of the entertainment committee.

The officers elected were as follows: President, Dr. W. E. Mercer, Liberty; first vice-president, Dr. J. K. Reticker; second vice-president, Dr. E. L. Caddick; secretary, Dr. Elizabeth B. Ball; treasurer, Dr. Joseph Blomer; censors, Dr. C. E. Ericson, Dr. W. D. Stevenson and Dr. J. K. Reticker; defense committee, Dr. John A. Koch; delegate, Dr. L. H. A. Nickerson; alternate delegate, Dr. E. B. Montgomery, all of Quincy.

Appointive officers: program and scientific work, Drs. Ball, Swanberg, Shulian, Wells; public health and legislation, Drs. Knox, Nickerson, Caddick; social and entertainment committee, Drs. Rice, McReynolds, Rucker; library committee and trustees, Drs. Pittman, Zimmerman, Baker.

Annual Banquet

The annual banquet took place on Monday, January 10, 1921, at the Hotel Newcomb. A five course dinner was served about 8:30 p. m. Besides a goodly number of members there were present the president and second vice-president of the Illinois State Medical Society—Drs. W. F. Grinstead of Cairo and W. E. Shastid of Pittsfield, respectively. Dr. Grinstead gave an interesting talk. He has had a wide experience, is a good speaker and makes a good impression on his hearers. We are only sorry he could not have been present at a regular meeting. Almost every member knows Dr. Shastid, with his genial smile and

good fellowship feeling toward all. He always received a welcome in Adams county.

February Meeting

The February meeting took place at the Chamber of Commerce on Monday evening February 14, 1921. In the absence of the president, who was ill, meeting was called to order by First Vice-President Dr. J. K. Reticker.

Dr. German was elected to membership.

Dr. T. B. Knox, member of City Board of Health, asked the doctors to cooperate with the secretary of the board by reporting cases of communicable disease, especially measles, which is prevalent.

Since Quincy is to have a new and recognized form of city health board in May, it was deemed wise for the Society to take some action regarding the same. Accordingly, Dr. Rice moved that a committee of three be appointed by the chair, our councilor, Dr. H. P. Beirne, being a member of this committee, to confer with the city officials and others interested in this movement. Seconded.

As an amendment to the above motion, the following was offered—that the society recommend Dr. J. B. Rucker, Quincy, to this new board in the capacity of pathologist.

Motion and amendment carried. Committee: Drs. H. P. Beirne, J. H. Rice and T. B. Knox.

One application read and turned over to Board of Censors. Adjourned.

ELIZABETH B. BALL, Secretary.

COOK COUNTY

CHICAGO MEDICAL SOCIETY

Regular Meeting, February 9, 1921

1. Appendicitis—Ed. H. Ochsner.
General discussion.
2. Auscultatory Findings and X-Ray Densities Noted in Incipient Tuberculosis—Kennon Dunham, Cincinnati, Ohio.

Joint Meeting Chicago Medical and Chicago Neurological Societies, February 16, 1921

1. Headache of Ocular Origin—Wm. H. Wilder.
 2. Sinus and Indurative Headaches—Chas. Louis Mix.
 3. Psychoesthenic Headaches—Lewis J. Pollock.
 4. Migraine—Sydney Kuh.
- G. B. Hassin, Pres. Samuel N. Clark, Sec'y.

Joint Meeting of Doctors, Dentists and Druggists, February 23, 1921

MEDICAL ECONOMICS

Health Insurance, State Medicine and Allied Dangers to the Profession—Dr. John J. A. O'Reilly, Brooklyn, N. Y.

From the Standpoint of the Druggists—Mr. S. C. Henry, Secretary, National Association of Retail Druggists.

From the Standpoint of the Dentists—Dr. Don M. Gallie, Member State Com. on Legislation, Illinois Dental Society.

Regular Meeting, February 2, 1921

1. Commitment and Care of the Insane—H. J. Gahagan, late Supt. Elgin State Hospital.
Discussion: Ed. A. Foley, Bayard Holmes, Sr.
2. Pachymeningitis Hemorrhagica—E. R. LeCount.
General Discussion.
3. Ulcer Cure Following Gastric and Duodenal Perforations—Karl A. Meyer.

CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY

Meeting, November 3, 1920, Continued

In another case of an endothelioma, of the endovascular type, of the middle ear, one did not expect a great deal of hemorrhage on account of this tumor developing within a vessel. The speaker had a great deal of difficulty in treating the case and in dealing with the hemorrhage from the ear. It was not always possible to control this by packing, even though one had a firm canal. In this case too, the blood went into the mouth. It finally was necessary to ligate the common carotid. She was still living although with marked facial paralysis. The endothelioma had not recurred when he heard from her about six weeks ago.

Another point should be considered. If one accidentally opened the sinus and knew he probably had an infection pouring in from the suppurating ear, would it not be safer to shut off the general circulation, both cerebral and in the neck? In a case of that kind threatened with pyemia, Dr. Beck would rather do a ligation and pack off the lateral sinuses than to let the case go along and take chances, providing the patient was at all safe for such procedure.

DR. HOLINGER emphasized the fact that such accidents are only possible in the presence of anatomical abnormalities but are probably more frequent than the essayist seemed to suspect. He mentioned two abnormalities; first, a protruding jugular bulb and second, ectatic veins in the membrane. Unfortunately neither can be recognized in a swollen and inflamed drum membrane.

DR. GEORGE W. BOOT read a paper entitled "Abscess of the Frontal Lobe Secondary to Sinus Infection."

(Abstract)

The patient was a man aged 41 years, a Bohemian, who had pus in both nares, absence of all four turbinates, a fluctuating edematous swelling over the right side of the forehead and extending back over the top of the head, with an opening discharging pus over the right frontal eminence. No sinus was to be seen in the X-ray picture. The patient walked into the examining room with the above symptoms. The next day he was comatose with spasm of the left forearm and hand and with the head turned strongly to the right. There was conjugate deviation of the eyes to the right. Operation was performed that evening and a shallow frontal sinus found on external operation. Pus was found between the bone and the dura and also inside the dura. An abscess was found near the falx. Patient rallied somewhat but died within forty-eight hours.

Dr. Boot urged earlier diagnosis, if it were pos-

sible, in such cases and advised exploratory operation in cases of frontal sinus suppuration that were showing mental changes or changes in the cerebro-spinal fluid, without waiting for localizing symptoms. In this way the present high mortality of frontal lobe abscesses may be lowered.

DISCUSSION

DR. SONNENSCHNIGER stated that about four and a half years ago he had an unfortunate experience in the case of a medical student who developed a very acute right frontal sinusitis. Within twenty-four hours from the onset of the pain he had a tremendous edema of the eyelid, and despite the use of ordinary measures for two or three days pain and swelling did not subside, nor did the temperature.

The anterior tip of the middle turbinate was then removed and a large quantity of pus evacuated. The symptoms did not improve. He then took the patient to the Michael Reese Hospital and Dr. Frank and himself opened the sinus externally and found a good deal of pus which was drained. The patient recovered and reached the point where he expected to go home the following day, but on that day he had a chill and the temperature rose to almost 106° F. Spinal puncture was made twenty-four hours later and turbid fluid found. A neurologist in consultation suggested frontal lobe abscess. They then opened the wound and explored the posterior wall of the sinus but found no dehiscence, and no necrosis. They removed the posterior wall and put a trocar into the frontal lobe and a large quantity of pus escaped. The patient, unfortunately, died. Whether the infection spread through small veins or lymphatics along the posterior wall of the sinus he did not know, but no macroscopic lesion was present.

DR. G. HENRY MUNDT stated that in conversation with Dr. Boot he told him of the most spectacular case of frontal lobe abscess he had ever had. Five or six years ago he had an intranasal operation on a young man, seventeen years of age, for a frontal sinusitis. The case apparently cleared up. Some months afterward he presented himself and was again having symptoms. He had a roentgenogram taken at this time and the roentgenologist stated there was some osteomyelitis in the frontal sinus. An external operation was advised but refused. The patient got into the hands of some other practitioner, and eventually, when Dr. Mundt saw the boy, in company with two general practitioners, he had paralysis of the respiration. He was kept alive for two or three hours with the pulmotor, until his fingers and toes got cold. This boy was walking about the street six or eight hours before he had this attack. He had eaten dinner in the evening at 6 o'clock and the paralysis of respiration came on about 7 o'clock. The patient died, and immediate post-mortem revealed from four to six ounces of pus in a frontal lobe abscess. There were no symptoms previously that were referable to the frontal lobe abscess.

DR. JOSEPH C. BECK asked whether the ventricles were opened in the post-mortem examination.

DR. MUNDT replied that he could not recall whether they were or not.

DR. ALFRED LEWY asked Dr. Boot if he had observed in the patient with frontal lobe abscess any focal symptoms or anything that could be classed as focal symptoms of the mouth, movement of the tongue, jaws or lips, and cited two cases of frontal lobe abscess seen by him.

DR. JOSEPH C. BECK thought the report of Dr. Boot should be criticized because it was not complete.

Schaefer had called attention to some of these cases in reference to the olfactory function, and had pointed out in unilateral involvement of the frontal lobe there were frequently demonstrable changes in the olfaction. There was parosmia or symptoms of disturbed function of the sense of smell. There was not a loss of the sense of smell, but rather an irritation and an abnormal interpretation of odors.

The members ought also to have been shown the X-ray picture of the case to determine whether there was really an abscess of the frontal sinus. If he found it at the operation, Dr. Beck thought no matter how much it was involved

in the process of necrosis or filled up with pus, a good X-ray plate of one side of the nose or on the other side of the sinus would show some indication of a frontal sinus.

The blood picture given without any differential count was another thing which was not clear. The differential count would have clarified the point as to whether there was a deficiency in the polymorphonuclear cells.

The Doctor also said he had incised the subperiosteal abscess, yet there was no statement made as to an examination to determine whether the turbinates were out. While the patient was relieved after an intranasal operation, might not this patient have had an acute exacerbation of an old abscess due to a chronic condition?

The speaker's experience with cases of frontal lobe abscess was limited to about 20 on which he had operated, but of this number there was only one of the real brain abscess cases that survived operation.

As to the prognosis of frontal lobe abscess in contradistinction to brain abscess from the middle ear, Dr. Beck believed the circulation had something to do with it.

In reference to the central vein that went through the foramen cecum and the longitudinal sinus, with distribution of the circulation at this point, it was a venous circulation. This point was never referred to very clearly by anyone in reports of frontal lobe abscesses.

A thing that had impressed the speaker in connection with these brain abscesses was the anatomical formation of the anterior horn of the lateral ventricle, which was so close to the frontal lobe that infection could readily take place in such a case as Dr. Boot had reported. The speaker had had such an experience. A patient who had felt perfectly well one week previously presented symptoms of frontal lobe abscess, which soon resulted fatally. At the post-mortem examination a complete section of the brain was made, which showed perforation into the ventricle, with a sudden increase in pressure on the vital centers and this would give the symptoms Dr. Boot had described.

DR. HOLINGER said that spreading of pus in the diploe of the skull is not a rare occurrence around the frontal sinus as well as around the mastoid in cases of empyema of those sinuses and cells and cited a few examples of both kinds.

DR. BOOT, in closing the discussion, said he would not expect in lesions of the frontal lobe to find focal symptoms except of a mental nature and in the case he had reported he had been unable to elicit them since the patient spoke only Bohemian and because of the short time the patient was under observation.

Not long ago at the meeting of this society the subject of streptococcus meningitis was brought up and the statement made that streptococcus meningitis did not recover. Dr. Holinger had one such case at the County Hospital that Dr. Boot also saw that did recover. Streptococci were found in the spinal fluid. The speaker also had a patient with abscess of the right temporo-sphenoidal lobe in which the lateral ventricle burst when the explorer was but half way through the cortex, and the cerebro-spinal fluid was thrown out some eight inches. The fluid, which was of a greenish tint, was collected and smears made at once showing many short chains of streptococci. The abscess was evacuated and the patient did very well for a week or more and then became more and more sleepy, finally dying in coma. Apparently an encephalitis had developed. There were no further signs of brain abscess.

In the case reported in the paper the X-ray examination failed to show the presence of a frontal sinus although one was found some two cm. in diameter and 0.5 cm. deep, filled with pus. The skull was very thick.

In answer to Dr. Levy's question there were no chewing motions or other focal signs until the tonic spasm of the left arm and hand developed.

In answer to Dr. Beck's criticisms, the serious symptoms developed so rapidly when they did come that there was not time enough to get a Wassermann reaction or to do the other things that one would like to do to get a complete report. The patient a chance for his life by operating.

The reason why abscess of the frontal lobe secondary to abscess is because the diagnosis is not made early, because the focal symptoms are late in developing. This case was

reported to show how serious a case might become before sinus disease has a worse prognosis than temporo-sphenoidal. It was a question of doing what was possible in time to give definite localizing symptoms occurred and to urge the members of the society to operate early on cases of frontal sinus infection where things were not running smoothly, without waiting for localizing symptoms. In other words, to do an exploratory operation.

CHICAGO OPHTHALMOLOGICAL SOCIETY

A regular monthly meeting was held November 15, 1920, with the President, DR. ALFRED N. MURRAY, in the Chair.

RETINITIS PIGMENTOSA; REPORT OF AN UNUSUAL CASE

DR. GEORGE F. SUKER reported the case of Mr. T. H. P. who consulted him in July, 1914, then aged 53, on account of failing vision for near work. Family history negative as to consanguinity and syphilis for many generations back. Physical examination of the patient negative as to syphilis, tuberculosis, rheumatism and gout. He had the usual diseases of childhood, and had not been sick for years since. Never had had any eye trouble needing any attention (patient's remark) excepting glasses for near work.

Upon examination, 7/20/14:

O.D. 20/20—75=20/16.

O.S. 20/30+75=20/16.

Accepts for near point +250 in each eye.

Fundus examination shows typical retinitis pigmentosa spots in each eye limited to the nasal half of each retina. The temporal half of each retina absolutely free from pigment spots and no suspicion of any chorio-retinal lesion. The pigment spots came up to the median line above and below and occupied the outer one-third of the periphery of each nasal retina. Each optic nerve absolutely normal as to color and vascularization. The characteristic waxy color of the disc definitely and distinctly absent.

The vitreous was free from any kind of opacities; lens normal; iris reactions normal. The field of vision for each eye was taken and was as per perimetric charts appended (see Figs. 1 and 2). In each temporal field there were large, almost coalescing scotomata, thereby giving a temporal hemianopsia. Form and color fields restricted in temporal field to about 35 and to about 45 in nasal field, each eye.

Patient stated that he never, as a child, could see well at night, and did not now. Night vision was not any worse now than it was 40 years ago. He never has had any treatment for his eye and never wore glasses until the age of 45 for his presbyopia. He was wearing +1.50 each eye when examined and now accepted in each eye +2.50. No treatment was deemed advisable and none given. Patient returned in October, 1920, for change in lenses. Examination showed: O.D. 20/30+1.00=20/16; O.S. 20/40+1.25=20/16 and +4.00 each eye for near point.

There now were typical pigment spots in temporal half of each retina, thus giving a complete circle of

pigment spots. This circle of pigment did not encroach any further towards the optic nerve than did the pigment on the nasal side in 1914. Again the disc did not show any waxy appearance. The balance of the retina not involved and the choroid showed no pathology whatsoever and the media were clear. The field of vision for each eye was as shown by second sets of charts (figs. 3 and 4). The nasal field showed the same type of scotomata as did the temporal field in 1914 and they coalesced in about the same manner.

the vision did not gradually go down. The so-called improvement seen when one tries to treat these cases was, in his opinion, purely psychic. If sufficient enthusiasm was manifested by the doctor and sufficient armamentarium resorted to, improvement would result, but only mental. Cases would remain stationary only for a comparatively short time. The case that Dr. Suker reported with retention of 20/16 vision over a long period was remarkable; he had never seen one.

He believed that retinitis pigmentosa was a congenital defect. He was inclined to think that it was present or the factor or factors, that resulted in this condition were present at birth. He had invariably found other congenital defects associated in these cases, e. g., stationary opacities of the lens and vitreous, coloboma of the lens, deaf mutism, and in

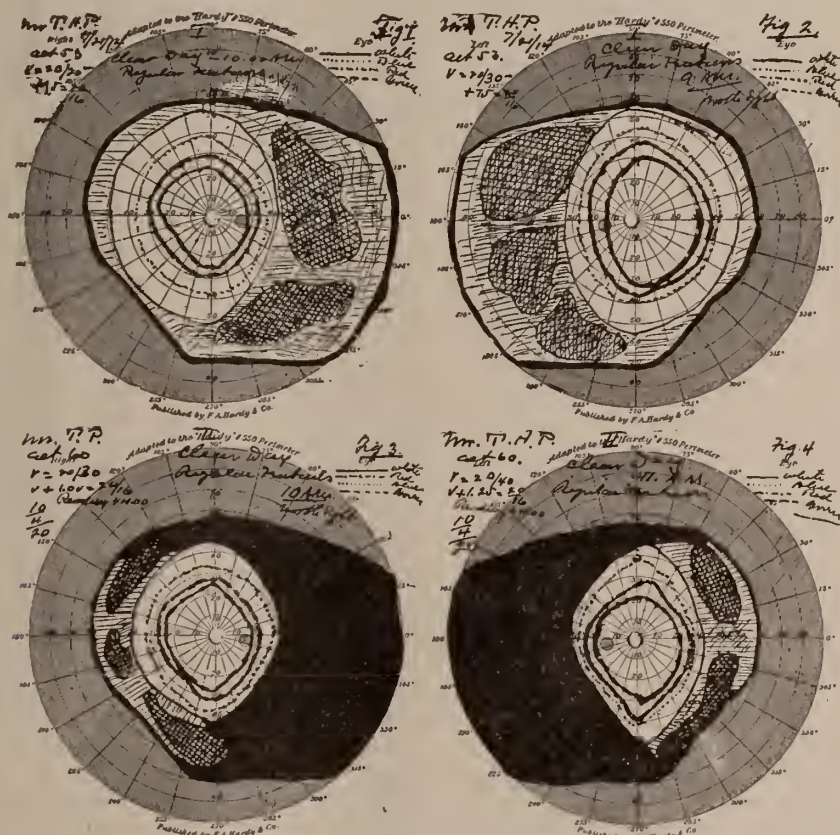


Plate 1. Figures 1-4.

The fields taken in 1920 do show that contraction has progressed slowly. No treatment of any kind was ordered.

The interesting features in this case are:

1. Absence of any of the usual supposed causes for retinitis pigmentosa.
2. The involvement of one-half of each retina for years (some 50 odd) before the other half became similarly involved.
3. The absence of the classic waxy discs.
4. The retention for years of normal vision.
5. The relative little annoyance caused by the nyctalopia and the symmetrically contracted visual fields—patient thinking himself normal except for nyctalopia.

DISCUSSION

Dr. Michael Goldenburg said that he had seen many cases of retinitis pigmentosa, but he had never seen a case where

one case he recalled the presence of polydactylism. The fact that it was not recognized early in life was due to our method of examination of children. He recalled one case of chorio-retinitis, where the proliferation of pigment epithelium assumed the bone corpuscle form and was anterior to the retinal vessels, and limited to the periphery of the field, but only on one side. This case was under observation and discussion, for sometime and was proven to be syphilitic.

As he had understood retinitis pigmentosa, it was a degeneration of the nerve fiber layer of the retina with proliferation of pigment epithelium. The findings invariably were a narrowing and straightening out of the vessels, particularly the arteries. The bone corpuscle pigment deposits anterior to the vessels and the so-called waxy appearance of the disc was referred to by the Germans as a retinitic optic atrophy.

He was not sure, but he believed Dr. Suker said his vision in 1914 was 20/40 or 20/50.

Dr. Suker stated that vision was 20/20 and 20/20 minus with correction.

Dr. Goldenburg stated that over a period of six years, he had never seen such a case. Personally, he would be very suspicious whether this was a case of retinitis pigmentosa

regardless of the pigmentation. The waxy appearance of the disc was important. He would rather doubt it. He had never seen one. The contraction was indefinite. The pigment epithelium proliferated usually at the periphery. The contraction of the field began at the periphery as did degenerations. He did not think one would find any of these cases, at least, all that he had heard or read about where there was a choroidal disturbance, it was purely a degenerative one.

As to consanguinity, he had never been able to trace a single case where he could say it was the etiologic factor. Dr. Gamble presented such a series of this before the society some time ago.

Dr. Francis Lane stated that the classical anatomic description of retinitis pigmentosa was that the tissue of election was the choroid. That theory was held for a good many years, but recently it had been advanced that the primary lesion was a degeneration of the rods and cones. He was very glad that Dr. Suker laid stress on the fact that the primary lesion was in the retina.

The proliferation of the pigment in typical cases began at the equatorial region. This was the location where the pigment epithelium of the choroid was first developed. The macula lutea was the last place involved in retinitis pigmentosa. There must be a degeneration of the rods and cones before the pigment periphery of the retina could migrate into the retina, because the outward limiting membrane was more or less of a closing membrane. It was only the rods and cones that used any pressure on or that came up to it. It was possible the first rods and cones that were developed were those at the equatorial region, because the eyeball developed and the rods and cones then developed more toward the central region. His understanding was that it was a proliferation of the neuroglia normally found, especially in the cup and covered the vessels as they came out of the physiological cup.

There was not any satisfactory explanation for the nyctopia with this exception, that the changes took place in the retina where the eye was most susceptible to light in the region of five to twenty-five degrees from the posterior pole. He did not think it was very difficult to separate those cases where the vessels were involved. He had specimens that showed where there was a sclerosis of the choroidal vessels. If the pigmentation migrated from any inflammatory process, it was always heaped up. It was not the fine feathery arrangement one found in retinitis pigmentosa. The changes in the choroid from degeneration and from any inflammation showed a different picture.

Dr. Thomas Faith stated that Dr. Suker's hypothesis of the endocrine disturbance seemed to him to have some support to lend by the pigmentation of the skin which occurred with hypoadrenia. Local spots in pigmentation of the skin occurred in patients who suffered from hypoadrenia. It was quite well known and definitely established now. The similarity in the development of the structures of the retina and the structures of the skin would lend some support to the idea that the disturbance might be through either. What one was at fault primarily, no one could say because they worked together.

Dr. Suker, in closing, stated that in many of these pigmentosa cases, it was difficult to say whether or not the pituitary gland or some other endocrine gland might be held responsible for a certain amount of changes. He had come to the conclusion some were. If one examined his retinitis pigmentosa cases from a general viewpoint, he would find some disturbances which could be analyzed as having some pathology based upon an endocrine gland disturbance. They presented either hyper or hypo pituitary or hyper or hypo thyroidism, or hyper or hypo suprarenal activities and changes. One had the skin disturbance as manifested by the scaly skin and also the myxedematous symptoms, such as swollen face and hands and other symptoms allied to myxedema or acromegaly in a modified type. In the case cited he found disturbances that were akin to those brought about because of faulty activity in that gland. He had always held the opinion that it was a purely retinal disease and not secondary to some form of choroiditis.

As far as attenuation of the vessels was concerned, that

was a secondary manifestation because of the development of the pigment upon them and a subsequent fibrosis. One would find in the majority of these individuals an element of vessel sclerosis, in a measure due to the direct contraction influence exerted by the pigment. The attenuation and the light streak along these vessels gave a relatively narrow vessel appearance. Unless one had associated disease of the cardiovascular system, the retinal vessels were but scarcely tortuous. Arteriosclerosis manifested itself usually first in the end arteries of which the retinal vessels were a typical example.

He was glad that Dr. Goldenburg brought up the question of consanguinity rather ironically. It is a hidden question. We can not easily get at it. The endocrine glands of the lower animals did not correspond to the glands of the human in every detail by any means, except in the matter of shape. The thyroid of the dog was not physiologically the same as that of a man; nor that of an ox the same as that of a dog. They had characteristics peculiar to their own species of animal. Even the thyroid and pituitary gland of a negro was not exactly the same as that of a white man in their functions. He had never seen retinitis pigmentosa in a negro. There was not a case on record as far as he was aware.

MICROSCOPY OF THE LIVING EYE WITH THE SLITLAMP OF GULLSTRAND

DR. ROBERT VON DER HEYDT read a paper on this subject in which he stated that the introduction of the slitlamp by Alvar Gullstrand in 1911 had opened an entirely new field for diagnosis and clinical observation to ophthalmology. The literature had been enriched by hundreds of reports by investigators in this new line of research. Many of these reports were epitomized by him.

Corneal microscopes, monocular as well as binocular, had been obtainable for many years, but owing to the imperfect and low degree of illumination furnished, had had but a limited field of usefulness. The stereoscopic binocular microscope now had attained full practical value by being combined with the slitlamp of Gullstrand. The types of illumination adapted to the slitlamp had been of several kinds. The Nerst fiber had until recently been used by most investigators. Vogt had also adapted an archlight. Lately another type, the Wolfram spiral, enclosed in a bulb, containing nitrogen, had been adopted because of its greater intensity of light. The light after passing through a double lens was focused onto a narrow slit diaphragm. It then passed through a larger diaphragm and lens of about 7 c.m. focal power, and by this was projected onto the eye. By these means the concentrated, nearly homogeneous, sharply circumscribed, quadrilateral beam of light was practically freed of aberration.

By means of various combinations of oculars and objectives with the microscope a series of magnifications of the area under observation, ranging from 9 to 108 times might be attained. With the highest magnification, however, the physiologic oscillation of the eyeball became objectionable and interfered somewhat with accurate observation. The microscope was mounted on a base adjustable forward and backward, as well as from side to side by rack and pinion. Chin support and headrest for the patient were essential. Various methods of observation had been used.

By direct focal illumination the tissues appeared in their natural coloration and form. In diaphanoscopy

the tissues were transilluminated by reflection of the light from a surface beyond the object under observation. The reflections of light from limiting surfaces were often seen when using the ordinary ophthalmoscope and especially the reflection on the anterior corneal surface was considered an annoyance. With the slitlamp method they might, however, assume a sphere of decided usefulness. When the microscope was exactly focused onto them they disclosed a world of information regarding the minute structure of these various limiting surfaces. Microscopic measurements of the size of objects and the exact determination of their depth within the various media was now possible.

Koepe had applied a contact glass to the eyeball, wherewith the curvature of the cornea was eliminated. In this way the retina might be studied stereomicroscopically under a magnification as high as 70 times, and the angle of the anterior chamber under one of 40 times. By the insertion of two Nicol prisms, Koepe also made observation in linear polarized light.

He gave an abbreviated outline of some of the findings made with these new instruments, many of which he had recently been able to verify.

The limbus presented a whirl of vascular loops and arcades, with their convexity toward the cornea. The greater part of these vessels were normally empty. By transillumination the blood current might be easily seen under high magnification. At times, in certain vessels, the current came to a standstill, and it had been seen to reverse itself. In many individuals, especially below the cornea, there was a radiating series of straight tubular structures, which Vogt had termed the palisades. They each contained a vessel, a vas afferens, and represented the superficial arterial pathway to the vascular loops at the limbus.

At the corneal border a physiologic dew-like infiltration of the cornea might be noted. This was composed of fine droplets about the size of the epithelial cells. According to Vogt this phenomenon in all probability represented an increased saturation of the peripheral epithelial layer with a nutrient fluid. Isolated areas of dew-like changes on and in the epithelial and endothelial layers of the cornea were common pathologic findings seen with the slitlamp. When focusing onto the cornea, the anterior surface manifested its approach by the appearance of small ringlets and dots, which were movable. These were the corpuscular elements in the lacrimal fluid, and they might be greatly increased in numbers by rubbing the eyelids. The corneal substance, owing to its varied anatomical components, which latter all presented different refractive indices to one another, was diffusely luminous. This luminosity increased with age. Within the corneal substance, superficially and medial, never in the deep layers were the nerve fibers. They, as a rule, were dichotomously branched and often showed a modulation for a short distance inward from the limbus. Of the precipitates on the posterior corneal wall and of the clouding of the

aqueous, in iridocyclitis, pages of descriptive matter could be written. The beauty of synechia could only be appreciated when seen. He had had the opportunity to carefully examine many cases of this kind stereomicroscopically under as high as a 40 times magnification, with the slitlamp.

One of the most beautiful phenomenon he had seen with the slitlamp was the process of dilatation and contraction of the pupil even under low power. The rounded edge of the pupillary border was rolled in and out somewhat as when a curtain is wound over a pole. During dilatation, for instance, posterior areas appeared from behind the pupil, and rolled forward onto the iris on account of the contraction of the superficial muscles. The stroma was most artistic in its balcony and lattice-like formation when seen in the perspective. A depigmentation of the pupillary collar of the iris, so that over large areas the pigment had been denuded, leaving only a pigment free, honey-comb-like, hollow framework, or translucent crust was described. Part of this pigment was precipitated to the angle of the anterior chamber, and this process had been construed as predisposing to glaucoma by Koepe.

Vogt, however, was Scertain that this depigmentation was a senile phenomenon and described the development of newly-formed islands of pigment deposit under the stroma as part of this process. Senile cataract manifested itself with slitlamp illumination in its incipency by an iridescence of the layer directly under the capsule, and those bounding the senile and embryonic nuclei. Senile changes were not subcapsular as was generally supposed, but involved the whole of the cortex. In most cases the nucleus remained comparatively clear, so that apparently fully mature cataracts might be opaque only in the cortical substance. In very advanced cases a subcapsular surface area containing vacuoles was discernible.

In the vitreous one saw a definite supporting structure. Exudative deposits and blood remnants were suspended in this and on movement of the eyeball the whole mass was set into motion. After the eyeball had come to rest they, however, were seen to return to their definite original location. By using the contact glass of Koepe over the eyeball, he had been able to see the fundus stereomicroscopically under a magnification of about 40 times. The crossing of the retinal vessels one above the other was beautifully seen in the perspective. In cases of retinitis pigmentosa Koepe had ascertained that the pigment might wander into the vitreous.

DISCUSSION

Dr. Michael Goldenburg said that he was somewhat familiar with the work of the essayist for some time past, due to the courtesy of Dr. Von der Heydt who permitted him to read some of the original text in German and parts of his translations. He had also had the opportunity of examining an eye with this instrument, but owing to the limited time at his disposal, he did not and could not expect to see everything as described by the author.

(To be continued)

MORGAN COUNTY

Memorial to Dr. Thomas J. Pitner

At a meeting of the Morgan County Medical Society a notable tribute was paid to the life and work of Dr. Thomas J. Pitner, whose death was recorded in the JOURNAL for January. Dr. F. A. Norris presided and Dr. A. J. Ogram acted as secretary, with a large attendance of members. Dr. J. R. Harker gave an address on Dr. Pitner's interest in education and in religious work. Dr. Carl Black referred to the doctor's interest in the public library, and detailed his contributions to medical literature. Dr. J. W. Hairgrove eulogized Dr. Pitner as a consultant, whose services were in great demand and highly appreciated by his confreres. Dr. H. C. Woltman reviewed his life and courage that met physical weakness without dismay and enabled him to continue his life work to the last. Others related reminiscences of early relations with the doctor.

Dr. D. W. Reid introduced the following resolution which was unanimously adopted.

WHEREAS, Death has taken Dr. Thomas J. Pitner from our midst, we, the members of the Morgan County Medical Society consider it a privilege to record our appreciation of his character and to declare our sorrow at his death, and

WHEREAS, Dr. Pitner, a scholar and a Christian gentleman, held through over 50 years of service in our society, and in our community a unique position, because he gave in unstinted measure of himself, to maintain a high standard of medical proficiency and to shape the policy of the society toward elevating the profession; therefore be it

Resolved, That in the passing of Dr. Pitner the members have suffered a loss that will be felt as long as memory lives. The loss of a friend kindly and courteous; of a colleague helpful and fair and of unbending integrity; of a citizen of great public spirit, with malice toward none and with charity toward all; and be it further

Resolved, That we convey to Mrs. Pitner our sympathy with a copy of these resolutions and that the resolutions be embodied in our records and that they be sent to the ILLINOIS MEDICAL JOURNAL.

Personals

Dr. Hiram J. Smith has tendered his resignation as superintendent of the Illinois Charitable Eye and Ear Infirmary.

Mr. W. H. H. Miller, Champaign, has been appointed by Governor Small as Director of the Department of Registration and Education, in place of Mr. Francis W. Shepardson.

Dr. Charles W. Hanford was recently appointed consulting radium therapist at Cook

County Hospital, the position having been created by the late Peter Reinberg, president of the County Board.

Dr. Ethan A. Gray, superintendent of the Chicago Fresh Air Hospital, has been engaged by the La Salle County Tuberculosis Sanitarium Board to conduct the clinic at the County Sanitarium monthly; also to check up the work of the sanitarium, and make such recommendations as he sees fit for the betterment of the patients.

Dr. A. J. Roberts, of Ottawa, Ill., is medical director at this institution.

Dr. Samuel N. Clark, psychiatrist Illinois State Psychopathic Institute for the past seven years, and associate, Division of Neurology and Psychiatry, University of Illinois Medical Department; also secretary of the Chicago Neurological Society, has become a member of the medical staff of the Norbury Sanitarium, Jacksonville, Ill.

Dr. E. W. Fiegenbaum, secretary of the Morgan County Medical Society for fifteen years and president of the Illinois State Medical Society in 1918-1919, was the guest of honor at a banquet at the American Annex in St. Louis, February 21, on the occasion of his 45th anniversary in the practice of medicine. The banquet was given by members of the Tri-City Medical Society, fifteen of the twenty members being present. Dr. B. H. King of Granite City, presided.

News Notes

—The new tuberculosis sanatorium for men at the Lincoln State School and Colony has been completed. The old sanatorium will be occupied by women patients.

—It is reported that Mrs. Francis Kleine of Granite City was arrested by the Department of Registration and Education for practicing midwifery without a license. On February 10 she was found guilty and fined \$25 and costs.

—The Fulton County Tuberculosis society has been reorganized with the following officers: President, Dr. D. S. Ray; vice-president, R. C. Breth, Canton; secretary, Dr. N. L. Crouch, Fairview; treasurer, J. J. McNally, Lewistown.

—The medical staff of the Methodist Hospital

of Central Illinois, Peoria, elected the following officers at their annual meeting: President, Dr. Wright Williams; vice-president, Dr. A. A. Knapp; secretary-treasurer, Dr. F. M. Meixner.

—The Sangamon County Medical Society have appointed a committee to investigate the desirability of erecting a new hospital at Springfield. Resolutions were adopted requesting that chiropractors, osteopaths and Christian scientists be prevented from practicing in the city hospitals.

—The New York Medical Journal, published by the A. R. Elliott Publishing Company, New York City, has been converted into a semi-monthly and is to be enlarged, giving more space to original communications and other departments.

—A case of anthrax, attributed to infection from a new shaving brush which contained no manufacturer's label, was reported to the Chicago Department of Health, January 31. The health department has issued a warning that all new brushes should be boiled for at least thirty minutes before use.

—It is reported that Dr. John W. Koehn of Chicago was recently arrested by United States deputy marshals on a warrant charging that he had issued 1,700 prescriptions for whisky within four months. Of this number, it is claimed, 1,000 were written on ordinary office stationery as emergency prescriptions for general debility.

—The reading rooms of the John Crerar Library are now open in the new permanent home at Michigan avenue and Randolph street, Chicago. Current literature is already available and it is expected that the complete library material will be accessible shortly.

—The Misericordia Hospital, Forty-seventh street and Western avenue, which will serve as a training school for Loyola University, was dedicated, February 2. The hospital was erected at a cost of \$180,000 and will have 100 free beds supported by funds of the Associated Catholic Charities. Dr. Walter G. McQuire will be chief of staff.

—Physicians of Kankakee organized the City Medical Society, February 8, with the following officers: President, Dr. A. H. Gollmar; vice-president, Dr. J. A. Bundy; secretary, Dr. A. L.

Nickerson; treasurer, Dr. J. A. Guertin; board of trustees, Drs. A. J. Brown, T. U. Caron and C. W. Geiger; board of censors, Drs. B. F. Uran, H. E. Delavergne and W. P. Cannon.

—At the regular meeting of the Peoria County Medical Society, February 15, the following recommendation was adopted: "We recommend that if it be deemed wise and necessary to standardize the hospitals that it be done by a representative authorized committee from the State Medical Society working with a similar committee from the American Medical Association, in collaboration with the hospital authorities."

—Dr. George Thomas Palmer, president of the Illinois Tuberculosis Association, Dr. J. W. Pettit of Ottawa, and Dr. E. W. Fiegenbaum of Edwardsville, were empowered to appoint a successor to Walter D. Thurber, as managing director of the association. Mr. Thurber resigned to accept the position of executive director of the Maine Public Health Association about May 1.

—At a meeting of the Chicago Tuberculosis Institute, February 18, Dr. Ethan Allen Gray was elected president, Dr. Thomas E. Roberts, vice-president, and Drs. Robert H. Babcock, Max Biesenthal, Paul C. Fox, William A. Evans, William Allen Pusey, Stephen R. Pietrowicz, David J. Davis, James A. Britton, and Prof. Edwin O. Jordan, members of the medical advisory board. Dr. William A. Evans was appointed a member of the executive committee.

—The district attorney's office, it is reported, will have submitted to it a report from the office of the federal prohibition director. According to this statement, Dr. Eldorado Scott, Hyde Park, said to be secretary of the American Protective Medical Fraternity, issued close to 2,000 prescriptions for liquor last year; about 1,200 of which were for "emergencies." The press account states that up to October Dr. Scott wrote "only something like 700" prescriptions for liquor; in October, 206; in November, about 350; in December, 553, including 51 "on Christmas eve" and 55 "on New Year's eve."

—The Physician Anaesthetists of Chicago have organized and elected officers as follows: President, Dr. Isabella C. Herb; first vice-president, Dr. T. Edward Costain; secretary-treasurer, Dr. Frances E. Haines.

The object of this society is the advancement of the science and art of anaesthesia. Meetings will be held the second Monday evening of each month. Physicians, dentists, and teachers and students of allied sciences are cordially invited to attend.

—The third annual meeting of the Western Electrotherapeutic association will be held at the Little Theatre, Kansas City, Mo., under the presidency of Dr. B. B. Grover of Colorado Springs, April 21-22. The annual dinner will be given at the City Club on Thursday evening, and a number of distinguished speakers will be present including: Surgeon-General Hugh S. Cumming; Dr. A. J. Pacini, Chief of the X-Ray Department U. S. Public Health Service; Dr. H. Bowing, Mayo Clinic; Dr. A. F. Tyler, Omaha; Dr. Wm. Benham Snow, New York City; Dr. Frederick Mores, Boston; Dr. Curran Pope, Louisville; Dr. T. Howard Plank, Chicago; Dr. Omar T. Cruikshank, Pittsburgh; Dr. Byron Sprague Price, president American Electrotherapeutic Association, and others.

A three days session of the Western School of Electrotherapy will precede the above meeting, beginning April 18.

Clinics and demonstrations will be held every afternoon. An excellent commercial exhibit, comprising all the leading manufacturers of apparatus is being arranged, and will prove of great interest to visitors.

For information or program address the secretary, Dr. Charles Wood Fassett, 115 East 31st street, Kansas City, Mo.

Marriages

DANIEL HAROLD LEVINthal to Miss Gertrude M. Coski, both of Chicago, December 19.

Deaths

WILLIAM HENRY GOODWIN, Danville, Ill.; Rush Medical College, 1899; aged 45; died, February 4.

HIRAM HOPKINS, Yorkville, Ill.; Rush Medical College, 1885; died at Elgin, Ill., January 16.

CHARLES R. HOUSE, Richfield, Ill. (license, Illinois, 1878); aged 73; died, January 23.

PERCIVAL GATES KELSEY, Evanston, Ill.; Chicago Medical College, 1864; aged 80; died, January 19.

ALMON AUGUSTUS MANSON, Chicago; Rush Medical College, 1903; aged 42; died, February 12, from nephritis.

DARIUS W. OWENS, Hersman, Ill.; College of Physicians and Surgeons, Keokuk, Iowa, 1878; aged 75; a veteran of the Civil War; at one time president of the Brown County Medical Society; died, January 22.

JOHN PAUL ASHWORTH, Chicago; Jenner Medical College, Chicago, 1906; University of Illinois, Chicago, 1914; aged 41; major, M. C., U. S. Army, and discharged, Aug. 1, 1919; died, January 24, from pneumonia.

MATTHEW J. COVENY, Spring Valley, Ill.; Detroit College of Medicine and Surgery, 1886; aged 60; surgeon for the Chicago, Rock Island and Pacific and the Northwestern railroads; died, January 27, from pneumonia.

MALCOLM B. MACLEAN, Chicago; Hahnemann Medical College and Hospital, Chicago, 1908; aged 41; a specialist in diseases of the eye, ear, nose and throat; professor of ophthalmology in the Illinois Post Graduate School of Medicine; died, February 11, from pneumonia.

DWIGHT FRANS MORTON, Taylorville, Ill.; Northwestern University Medical School, Chicago, 1902; aged 44; major, M. C., U. S. Army, and discharged, June 2, 1919; died at Philadelphia, January 27, from carcinoma of the intestine.

FRANK MONROE WELDY, Chicago; University of Illinois, Chicago, 1912; aged 32; a member of the Illinois State Medical Society; captain, M. C., U. S. Army, and discharged July 29, 1919; died, February 5, from pneumonia.

ST. ELMO MORGAN SALA, Rock Island, Ill.; Keokuk (Iowa) Medical College, 1892; aged 50; captain, M. C., U. S. Army, and discharged Jan. 7, 1919; vice-president of St. Anthony's Hospital, Rock Island; a member of the Western Surgical Association; died suddenly, February 17, from heart disease, shortly after performing a surgical operation.

THOMAS AUDLEY WAKELY, Jacksonville, Ill.; Rush Medical College, 1868; aged 78; a practitioner of Jacksonville for more than half a century; a life member and at one time president of Morgan County Medical Society; died in University Hospital, Philadelphia, February 4, following an operation. Dr. Wakely was the son of Dr. Thomas A. Wakely, a pioneer physician of Illinois.

JOHN E. ALLABEN, Rockford, Ill.; University of Michigan, 1883; aged 62; for many years a prominent surgeon and active member of the Illinois State Medical Society; a delegate to the International Association of Medicine and Surgery in 1913; said to have been the first surgeon in northern Illinois to operate for appendicitis; died February 9 after an illness of several years that caused his retirement from private practice in 1919.

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SYMPOSIUM ON COMPULSORY HEALTH INSURANCE AND ALLIED DANGERS*

DR. J. J. A. O'REILLY OF BROOKLYN, NEW YORK, REPRESENTING THE CHICAGO MEDICAL SOCIETY, MR. S. C. HENRY OF CHICAGO, THE AMERICAN ASSOCIATION OF RETAIL DRUGGISTS, DR. DON M. GALLIE FOR THE ILLINOIS DENTAL SOCIETY AT CHICAGO, FEBRUARY 23, 1921.

Dr. Edward H. Ochsner, Chairman: About six years ago a number of gentlemen in the east decided that the American people should have Compulsory Health Insurance. So they proceeded to draft a bill to that effect modeled after the German Compulsory Health Insurance Law. They introduced this bill in a number of State Legislatures in the Union, and one of the first states in which this bill was introduced was the State of New York. The State Medical Society of the State of New York and also the American Medical Association were rather undecided as to what position they should take in reference to these bills, and when they wobbled and in fact deserted the rank and file of the medical profession, particularly the New York medical profession, the thing happened that fortunately has usually happened in this country at the moment of a great crisis. A dauntless, fearless, courageous man arose from the rank and file, gathered about him a few like spirits, went up to Albany and snatched victory from what seemed almost certain defeat. It is our great privilege to have with us this evening this Leader of New York Invincibles. He will tell us how the victory was won in New York, and I am sure he will make some valuable suggestions which will be of use to us should the ugly Compulsory Medical Insurance bill show its head again in Illinois.

Thanks to the President of the Chicago Medical Society, the Chicago Dental Society, and the Retail Druggists Association, it is my privilege to introduce to you the fighting Doctor from Brooklyn—the Patrick Henry of the American medical profession, Dr. John J. O'Reilly. (Prolonged applause).

Dr. O'Reilly: I want to thank the Chairman for his kind words, but they don't all belong to me: A part of them belong to the inspiration which prompted

me to study medicine because of my profound reverence for its tenets and the men who live them.

I have been extremely anxious to meet the people out here in Illinois, of the medical fraternity particularly, because of the great part they took at New Orleans in that magnificent coup last April which put the American Medical Association squarely on record against compulsory health insurance, State or Nationally controlled, and rebuked the effort of some of the medical prominents to subordinate the organization to the purposes of the American Association for Labor Legislation, to the intense chagrin of the executives of that Association, who counted upon the statistical craft of Isaac Max Rubinow, aided and abetted by the president and some of his colleagues, to make the American Medical Association the pawn of the American Association for Labor Legislation, to the confusion of medical practitioners all over this country who had been exposing the viciousness and fighting the enactment of that social menace.

That this defeat is not regarded as final may be gathered from the contemptuous regard in which the resolution of the American Medical Association was held by one of the campaigners for the American Association for Labor Legislation at Kalamazoo, Mich., on May 20, 1920; they expect considerably better luck next time, and that puts us on notice that our lines of defense and offense must be strengthened against the 1921 meeting when—although I am not a prophet nor the son of a prophet, I can tell you that Compulsory Health Insurance will be played pianissimo, while State Medicine (Health Centers), National Socialization of Medicine, and Medical Practice (re-registration) Acts will come out *fortissimo*.

I was very much interested to learn from your Chairman, Dr. Ochsner, that twenty-five years ago in the State of Illinois a governorship was lost and won because the men and women of medicine went to the people with the facts and the people loved and knew and trusted their agencies of healing. "What men have done, men may do," but you and I must keep constantly before our minds some certain facts:

That twenty-five years ago there was no acute reconstruction period made necessary by the *kultured* madness of the paranoiac of Potsdam.

Twenty-five years ago there were no pre-war pacifists, no war time obstructionists and no post-war Apostles of Unrest, organized under the banner of "uplift," parading under the cloak of the "Brotherhood of Man" and singing a hymn of "Welfare" as a means of putting across vicious public health legislation for the benefit of the "Something for Nothing

*Held at Chicago Medical Society Joint Meeting of doctors, dentists and druggists.

Lads," at the expense of an over-burdened, tax-paying public, and in accord with the plans of the "Worshippers at the shrine of Something else than Americanism" who have flowed to our shores from the sewers of Europe for the past twenty years and whose high priests are found among the magazine, university, gutter and parlor anti-Americans and Americans—but, who are in sympathy with the doctrines of the Third Internationale and out of sympathy with the Institutions and traditions of this glorious Nation of ours, for which the men and women of all generations have given their lives.

Twenty-five years ago officership in County, State and National Medical Societies and professorship in Medical Universities was accepted in humility and exercised in profound good faith to the rank and file and the people whom they serve. Today, in far too many instances, medical prominents are elected to office by hero-worshipping medical Babes-in-the-Woods, and they promptly compromise their high office in exchange for a little flattery or the promise of some place of distinction or power, in this 'commission' or that 'bureau,' or the hope of a secretaryship in the Cabinet, as head of a Department of Public Health and Welfare designed for the politicalization of every agency of healing, down to the horse which draws the ambulance, and the cattleization of the people we serve into the card indexed units of Europe.

Twenty-five years ago the moneyed "Foundations" were just beginning to function and just beginning to realize the potentiality of the State as an employment agency for the proteges and graduates of their Schools of Sociology, Philanthropy and Psychology, then in course of endowment.

Twenty-five years ago there was no American Association for "Lucrative" Legislation to exploit these bills prepared ostensibly, for the betterment of the "Poor, dear Workingmen," but really designed for his political control.

Twenty-five years ago a Professor of Political Economy, even though also a Senator of the great State of New York, would not dream of telling an audience of domestic economists, otherwise known as the Ultimate Consumers, that the cost of what he termed "this wise social experiment," the Compulsory Health Insurance, would be "distributed in increased efficiency and good will." He would have been sufficiently scientific to know and sufficiently honest to say—what the 'Man in the Street' knows—that the employer's share of that cost would be added to his 'over-head' and appear as part of the increased cost of his product, and that this share as well as the employee's share would come out of the pocket of the Ultimate Consumer—that selfsame workingman—the Goat!

Twenty-five years ago a Governor of the great State of New Jersey would not dream of promising the medical leaders in his State, (and break that promise for a few wet votes) that he would not sign a Chiropractic Bill which would empower inadequately

equipped men and women to tamper with the life and welfare of the people of the State. Neither would a Legislature seriously consider a Chiropractic Bill, as New York did when it passed the 1920 Bill, which was promptly vetoed by the Governor, because it made it necessary for a man, in order to practice Chiropractic, to have been a criminal under the law for one year,—Chiropractics under the existing Medical Practice Act being misdemeanants.

Twenty-five years ago men and women of intellectual attainments would have realized that their exceptional opportunities and special knowledge imposed upon them the duty of great good faith to their less fortunate fellows, and proponents would not dare promulgate and leaders of medicine would not dare endorse propaganda for a Medical Practice Act which held that,

"by the annual re-registration of doctors, upon presentation of their credentials and a photograph (not thumb prints,—yet) and a two dollar bill, subject to the discretion of a Re-registration Board, a correct census of the agencies of healing could be secured and the illegal and unlawful practitioners of medicine located, and their punishment insured by the transfer of the prosecution from the District Attorneys of Counties to the Attorney-General of the State,"

because those intellectual men and women would have known and would have admitted that you, and we in New York and other States, need another State Medical Census just as much as a fish needs a bathing suit (laughter). And they would have known, or they would have known where to find out, that the fundamental laws of every State in the Union empower the Attorney General, for cause, to designate a special Deputy Attorney General to supersede a faithless or incompetent District Attorney in any County in any case in which the State, as such, is party in interest.

Twenty-five years ago and now, self-respecting, red-blooded American men and women would resent being paternalized and stigmatized as weaklings who would require that

"A health center be established and maintained in every agricultural center in order to bring the boys back to the farm, or keep the boys down on the farm," even though such a law might satisfy a Vaughan of Michigan to "remain a proletarian to the end of the chapter."

Twenty-five years ago there would have been found some medical men sufficiently wide-awake and experienced to have looked for and found a section of the "Health Center" bill, (Section No. 20 D), which makes that proposition available in the big cities—where the *Velvet* is!

Twenty-five years ago, and now, the American people that you and I love and serve would have a right to expect that their agencies of healing would measure up to their Civic responsibilities. From the most distinguished doctor in the Nation to the humblest practitioner in the backwoods, from the most

successful manufacturer of Medical, Dental and Surgical Supplies to the struggling tyro in Dentistry, or the assistant clerk in the village drug store, from the President of a Medical University to the most timid freshman—Doctors, Dentists, Druggists, Nurses, Surgeons, Specialists, *all*, men and women of high and low degree in the professions which have to do with the rapid restoration of the sick to health and usefulness, must know and must make their people know and understand that the practice of medicine is something more than the writing of prescriptions and the healing of hurts: That the solemn, sacred duty of protecting the public from disease and death is inseparable from the duty of protecting Society and the State from social disease and degeneration and from political disease and waste through vicious Public Health Legislation, in whatever guise it may appear. (Applause).

We dare not plead ignorance because as intellectuals it is our duty to learn and to know. We dare not plead impotence, because by the very nature and character of our education we are the best qualified teachers in Society, and by reason of the intimacy and sanctity of our relations with our patients we are the most forceful teachers of Society. We dare not plead lack of opportunity, because it is ours to make opportunity wait upon exigency, and to *go to the people with the facts*, in their homes and on the streets, in public halls and in the lay press of the country, by exhortation and in debate, that they may learn and know and decide between theory and fact, between truth and falsity, between economy and waste, between right and wrong. We dare not wrap the mantle of professional dignity and scientific absorption around us and hold aloof from Civics and Politics lest our stilted code of ethics and false pride should work irremediable harm to the families we cherish, the people we serve, the Order we venerate, the State we love and the Nation it is our duty to sustain. *We must go to the people with the facts* and put it up to them to decide whether the salutary work of State Medicine shall be extended beyond the safeguarding of the people from epidemic disease from within and without; the protection of the food, fuel and water supply to the individual; the removal of noxious material from the places of habitation; the protection of men, women and children from avoidable accidents to life and limb; the more generous care of the insane, mental defectives and epileptics; the safeguarding and comfort of children of school age,—and State Medicine, through a scheme for the socialization of medicine made to embrace the conversion of the people of the State into cattle-ized card indexed units, and their agencies of healing into impersonalized medical cogs in a huge political machine, and the people's right of free choice of who shall stand between them and death when disease enters the home, restricted or denied.

It is for us to warn and the people to decide whether the workmen of this country shall be set apart as a separate and dependant class whose domestic privacy,

self-reliance and self-respect shall be subjected to official and officious invasion and violation by busybody social surveyors under a Compulsory Health Insurance Act, or a State Medicine (Health Center) Act, or a Maternity and Birth Control Act, the Directors-General of which will be the false doctrinaires, the professional philanthropists and the political patronagists, and the moneyed foundations, under whose tutelage these "uplifters" exploit the mis-called "Welfare" measures with which the legislatures of the States and Nation have been flooded for the past several years.

It is for us to warn and the people to decide whether there shall be taken from the American Workman not less than 13.6 cents of every dollar he earns, be that earning what it may, for the creation of a huge political machine for the collection, distribution and absorption, in Illinois, for instance, of \$195,639,480.00 per Annum of which only 47.46 per cent. (less than one-half) will return to this same "poor, dear workingman"—the same 'Goat'—as cash, maternity and funeral benefits and health service and supplies, while 50 per cent., more than ninety-five millions of dollars, (\$97,819,740.00) will be taken away from his custody and control, ostensibly for maintaining and providing for Reserve and Guaranty, against the day of epidemic and catastrophe, but under cleverly conceived and well phrased sections of the Bill actually made available for the creation of an army of lecturers, social surveyors, field inspectors, sob-statisticians, etc., etc., for the dissemination of what those worthies may choose to regard as Preventive Medicine, of which you may be sure birth control will not be the least.

It is for us to warn and the people to decide whether the propaganda of the American Association for Labor Legislation, the Women's Trade Union League—(you know that in Chicago)—the New York League for Women Voters, the New York Consumer's League, the New York Federation of Labor and the Y. W. C. A.—which has become so honeycombed with radicalism in New York (I don't know how it is here) that decent, self-respecting women have to quit,—is the truth or a lie when they offer the average American workman Compulsory Health Insurance for a premium of twenty-four cents per week per employer and employee (\$24.96 per annum), or 4.5 cents of every dollar earned, be that earning what it may; whether that propaganda shall prevail over the conservative views of such organizations as the American Federation of Labor, the Brotherhood of Locomotive Engineers, and the United Textile Workers of America, who say that the scheme is wasteful of the money and man power of the State, destructive of morale, and an effort to secure control of the workmen through their most precious possession—health, and that it threatens the security of the American workman by denying him economic independence, penalizing him by deprivation of benefits should sickness occur during a strike or a lockout (or, as they call it in New York, a "vacation"), under cleverly prepared sec-

tions which treat of "Extension of benefits when unemployment is not due to sickness." Whether, in fact, the views of these seriously minded groups of labor men serve to fortify the humble efforts of the people's agencies of healing to bring home to them the menace of a "Welfare" which pauperizes,—a state in which "Uplift" is king, and waste its prime minister.

It is for us to warn and the people to decide from the simple rules of addition, subtraction, multiplication and division, and simple proportion, applied to that \$24.96 propaganda premium for the "average man," how it would be possible to furnish the statutory cash, maternity and funeral benefits—how will it be possible for this \$24.96 to supply the \$11.06 cash benefits for that "average man?" Now I want you to understand what this "average man" is so you will understand why I say that there are four kinds of liars—ordinary liars, (please pardon me, ladies) damned liars, some expert witnesses and nearly all statisticians. (Laughter and applause). A statistician can make thirty cents look like a dollar and a dollar look like thirty cents if you give him pencil and paper enough, and an "urge"—and a salary commensurate therewith. (Laughter). Now that average man is the most delightful thing the statistician has ever met! They say the "average man" loses nine days per year from illness. He earns \$2.00 per day—(I've been looking for that \$2.00 a day man to shake my furnace)—and that means \$18.00 wage loss per "average man;" "That means in the State of Illinois some \$54,000,000.00!" Then you open your mouth in a gasp and while your mouth is open they jam this down your throat:

"We will change all that—the people are spending their money now for health service and supplies, but they are making a mess of it, poor fish! We, the '*kultured*' ones, we, the advance agents of the Brotherhood of Man, we with the 'urge' for uplift of the poor, dear, workingmen, will take this out of their hands (and out of their pockets) and through this 'wise social experiment' called Compulsory Health Insurance, we will indemnify him for his wage loss and we will vouchsafe him the care of our gangs of impersonalized, panelized physicians in the charge of a foreman bossing each 'gang,' as 'medical officers' in charge of "Funds" of five thousand persons. We will so distribute the calamity of sickness that it will fall upon the just and the unjust, reduce the days lost per year from sickness, and we will make sickness as if it never was. (There will be 618 such funds in the State of Illinois!): Why, these "poetic doctors" of yours must be supersensitive in their pocketbook nerve, or they would cooperate, or at least compromise with us in our glorious altruism. Behold how some of your leaders in the County and State societies in New York, Indiana, Michigan, and elsewhere,—Aye! even in the A. M. A., the Lamberts, the Vaughans, the Cabots, the Commons, and the like, have fallen for our propaganda! Surely these are honorable men!

Well—Anthony said Brutus was an honorable man,

but he knifed his Caesar just the same; von Bernstorff said the wood cutter of Amerongen was an honorable man, but he sacked Louvain, and he sank the Lusitania; Lovejoy said Debs was an honorable man, but he sought to betray the country that gave him sanctuary. "By their fruits ye shall know them." (Applause).

How will it be possible to put aside as Reserve and Guaranty \$12.48, in accordance with the general insurance law requirements, against the emergencies of epidemic or catastrophe, and with the rest, residue and remainder (of \$1.42) pay an irreducible minimum administration cost of \$1.91—(there is a deficit of 49c already you see)—and also pay the "mean average cost per person per year for health service and supplies," \$24.74, for the sickness year of that average man, which the statisticians say is 9 days. *It simply cannot be done.* A conservative economic premium which would meet the necessitous expense for health service and supplies, \$24.74, provide the statutory cash, maternity and funeral benefits, amounting to \$11.06, pay the irreducible minimum administration cost, \$1.91, and maintain a reserve and guaranty of 50 per cent. of the premium, \$37.71, would be not less than \$75.42 per "average man" per year, or 13.6c of every dollar earned, be that earning what it may.

You must bear this in mind, and you must impress it upon your people, that whether the average allocation per person per year for health service and supplies is maintained at the mean of \$24.74 (which is conservatively calculated on the basis of the 1919 report of the U. S. Bureau of Labor Statistics), or raised to the alluring bait-point of \$2.50 per visit which was offered by the American Association for Labor Legislation before the State Medical Society of Michigan at Kalamazoo, May 20, 1920, there would still remain the political domination of all the agencies of healing, the destruction of professional morale, the abolition of free choice, the substitution of quantity medicine for quality medicine, of time service for heart service, the conversion of the sick citizen into a "thing" and his doctor into an impersonalized, panelized, cog in a huge political machine, or into a man without a profession if he refuses to submit to such panelization, as I will show you later.

It is for us to warn and the people to decide whether they shall tolerate writing this unscrupulous scheme into the body politic and whether, if they do tolerate it, they are prepared to be a party to the deception of the working man and when the bill becomes the law to jump his premium to the minimum economic point of \$75.42 per "average man,"—which means 13.6c of every dollar earned—or whether they will "pass the buck" of this deficit of \$50.46 to the taxpaying public,—the Goat, bearing in mind that this deficit for the 2,594,000 estimated working men in the State of Illinois for example, would be \$130,893,240.00 per annum and the reserve and guaranty—God save the mark, would be \$97,819,740.00, which constitutes a rather juicy melon for the professional philanthropists and the political patronagists to cut, under that sec-

tion which makes it available to teach the "poor, dear working man" and his employer how to make the "calamity of sickness" as if it never was. We must bear in mind also that the inevitability of this deficit and an open door for an annual deficit bill is recognized and provided for by section 11 or Article II of every compulsory health insurance bill that has ever been presented to any legislature in any state in the country.

Well again, in the State of New York there are five old-line insurance companies doing a health and accident insurance business who will offer you and me and every other man the same total amount of cash benefits, \$11.06, per "average man" for an average premium of \$20.74, and then you go out and freely choose your own beloved doctor, and pay him as you always have, for this health service and supplies the "mean average cost" of \$24.74, making each man's total outlay \$15.09, and please remember that the insurance companies are obliged to set aside \$10.37 as a *real* reserve and guaranty and that they cannot hypothecate it to teach birth control, either. The difference between the minimum economic premium of \$75.42 under "uplift" and panelization and the old line insurance premium of \$45.09 under actuarial experience and free choice would be \$30.33 per average man, or \$78,676,020.00 per annum in Illinois, and interest on that is pretty nearly three millions. It is pretty nearly time you people in Illinois began to think about interest—by yesterday's election you just let yourself in for an \$8,000,000.00 bond issue; you have robbed Peter to pay Paul, but when you get to the other end you are going to pay interest. Under this compulsory health insurance law the State of Illinois will be losing three million dollars in interest on that money, at three-and-a-half per cent.—some gamble for the workmen of Illinois, in the face of the thirty-three per cent. reduction in the number of employed between January, 1920, and January, 1921!

In the State of New York, at the Kings County Young Republican Club, Senator Davenport, the Senatorial father of the Bill and erstwhile professor of Hamilton College—which was not long ago a beneficiary from the Sage Foundation—(do you get the connection?)—said, professorially, "The cost of this measure will be distributed in increased efficiency and good will," and then he said, sneeringly, "We would not think of going to the doctors about costs!" Well—the doctors went to the people with the facts and information about costs and waste and the effect upon the health welfare of those people, and upon the morale of their agencies of healing, and then the people went to the polls in 1919 and elected a lot of proponents of Compulsory Health Insurance to stay home—where they belong. (Applause). In ten out of twenty-three assembly districts in my County alone the candidates went to the scrap heap on the Compulsory Health Insurance issue, and party solidarity got a jolt. In one of these districts there was a man by the name of Braun, in the twentieth assembly district of King's County, who said "I don't give a damn

for the opinion of the two hundred doctors and dentists in the 20th district, I am going to vote for the Compulsory Health Insurance if it comes up." Well—the people gave votes, and while that man in 1918 had a plurality of 3,122, in 1919 his opponent had a plurality of 1,679, and we did *not* go into politics and there is not a single club that can be wielded against our ethics, (applause), in King's County today. We held our meetings in the Democratic and Republican Headquarters through the courtesy of the political organizations, and we did not have to spend a cent for these halls because every man Jack had a family doctor, and he had a tender little spot for that family doctor, because he knew his self-sacrifice and devotion were not measurable in dollars and cents, and besides, the political leaders, knowing that here was a civic force in development which threatened party solidarity, figured that they had better not oppose us, and we said "we do not want your rooms in charity but as a right for the good we have always done for mankind without thought of recompense and without thought of self." In 1919 it came about that 500 doctors deserted their homes for the discomforts of travel and went up to Albany, and then we were received courteously—"Welcome to our city, Doctor dear!"—"Have a chair"—"Have two chairs" (laughter)—"There are so many of you that you will be uncomfortable in the Senate Chamber, come on over to the assembly chamber"—Oh! the beautiful flow of oratory of Senator Davenport when he portrayed his family doctor, and he solemnly promised us that he would not allow that Bill to come out of Committee until the sacred relation between the doctor and his patient was maintained and conserved,—but he lied, because I knew and he must have known that he had neither the power nor the disposition to keep it in Committee, and within twenty days he yanked it out of Committee and it was passed by the Senate but it was killed in Assembly in 1919, not because the doctors killed it—not at all, but because there were certain important financial interests in New York which were opposed to certain bills, including the Minimum Wage Bill—which is really camouflage for the *maximum* wage bill)—and it would be very risky for them to allow the Compulsory Health Insurance Bill to come out and to kill the others. The leaders would have a lot of explaining to do, and they are not in politics for their health. At that stage of the game (1919) we were just what is known as the 'fall guy.' We were the recipients of the pitying contempt of the men who made our laws, and one of the senators, a little more frank than the others, said to me March 19, 1919:

"Doctor, you doctors are the dearest people on earth, and we love every hair of your heads as individuals, but as a class you are rather a pitiable bunch. You spend your time and your money and your energy organizing and maintaining scientific societies for the advancement of science and the betterment of your fellowmen, and you don't know a thing about self-preservation. The prop-

agandists are organized but *you* are not and you are not even well informed. The Bill will be killed in the Assembly; go home and organize"—

and I did not have any come-back because what he said was true: We came home and we organized; we went into the highways and the byways, and we hung the mantle of professional sacrosanctity in the moth bag and we talked to the doctors in the medical societies, and in the dental societies and to our pharmaceutical brothers whenever and wherever we found a chance, whether they were organized or not, because the "un-organized" doctor is just as dear to his patients as the President of the American Medical Association—and he controls just as many votes on election day. We went first to the medical societies and after much persuasion they came in and formed a little guild. Those dear doctors are so timid! "The higher you are the further you fall," and the more distinguished a doctor is the more jealous he is of his reputation. You know perfectly well it is a theory and not a condition that confronts you. Take the most excellent physician in the city of Chicago today, a man who has spent his whole life in sacrifice and service and let a breath of scandal be uttered about him and the morning *Tribune* will come out and his reputation will be blasted. That is true of the minister—(not of the lawyer)—and true of us. I don't know how the lawyers (and I am one of them) escape (laughter) except that you can't spoil a bad egg. (Laughter and applause). We organized a Professional Guild and we went out into the highways and the byways. We told the people what the situation was and educated them by word of mouth and printed pamphlet. Then, in 1920, instead of five hundred men, four men and my humble self went to Albany, and when we went we were "*chesty*." We went not so much as doctors but as prize fighters who had acquired a "reputation" for beating somebody, and for the first time in twenty years the doctors, dentists and druggists got a respectful hearing. Speaking for sixty-two counties in the State, we attended the "pro forma" hearing on the Davenport Compulsory Health Insurance Bill—ignoring Senator Davenport's tricky telegram "not to bother"—and that Bill died in Committee; the Medical Practice, Re-registration Act, was killed on the floor of the Assembly; a very well financed lobby got the Chiropractic Bill through the Legislature but Governor Smith killed it with his veto; we drugged Drugless Therapy to a standstill, and when they swept up the Legislative Chambers at the close of the Session they gathered up thirteen out of thirteen bad public health bills that had been sent to the scrap heap—to join the candidates who had been retired on a Compulsory Health Insurance issue in November, 1919. (Prolonged applause).

Now after the November election the compulsory health insurance Bill in New York got appendicitis or something (laughter) which required its subsidence for a while and not too much exercise, and so Senator Davenport introduced it in 1920 "for educational purposes, only," and they promised a campaign of educa-

tion as an antidote for the "poison" which these doctors had applied to the public mind and which they said had "changed its condition of receptivity of this wise social experiment to one of antagonism." It will be introduced this year "for educational purposes"—whatever "educational purposes" means—but they have neither the hope nor the desire to pass this bill, for two reasons: first, "you cannot fool all the people all the time" and, second, they have something 'just as good' or better, and so they will concentrate their activity upon State Medicine—Health Centers—which Dr. Harris of Dalhousie University calls "Socialism in Eccelsis" and which is the fulfillment of a threat uttered by a representative of the American Association for Labor Legislation on December 11, 1919, in the course of a debate which I had with him before the King's County Dental Society, when he said, "If you succeed in beating Compulsory Health Insurance you will have to take State Medicine."

Now what is this State Medicine—these Health Centers? In a nut shell, it is Compulsory Health Insurance and *then* some. It provides for a large and prolific political machine with the State Superintendent of Health, appointed by a partisan governor at the head, and the system running out through Boards of Supervisors, Boards of Selectmen and Common Councils in the towns, villages and small cities, and Boards of Estimate and Apportionment in the large cities where the "pickings" are. These political bodies have the power—now you tax payers, open all your ears (laughter)—they have the power to contract and levy taxes to pay for land, buildings, equipment and supplies of all kinds, and of contracting with and discharging employees, lay and medical, of all kinds. These political bodies will exercise their powers either directly or indirectly through other lay officials appointed by or through them, or by the State Superintendent of Health who, under the Patronage Committee of the party in power, has the final word.

Under this State Medicine there will be clinics for everything from baldness to bunions and all between (laughter),—including surgery, dentistry and the specialties. Under this State Medicine Bill there will be the periodical examination of the people—"Fisher-ization," you know—and their separation into groups manifesting degrees of normalcy—isn't that a *sweet* word? (laughter). If they fall below an arbitrary standard they will be given the "yellow ticket" to place them without the pale, as subnormal, until they are duly "uplifted" to the satisfaction of such organizations as the Modern Hospital Association, the American Association for Labor Legislation, and unless you medical men and women wake up the American Medical Association and the American College of Surgeons will be prostituted to this combination, and will become an integral part of this organization in restraint of the freedom of choice of our American people!

Now, there is one thing I find among doctors all over—the little disposition to do the "shimmy" (laughter)—you know, every time somebody says "you

ought to be ashamed of yourself—you are just thinking of your pocketbook in connection with this legislation." Now for heaven's sake have the moral courage to remember this—that not since the days of Adam and Eve have we been able to pick clothes off trees (laughter). That, unlike the "lillies of the field, which toil not, neither do they spin" we must take some thought of what we shall eat and what we shall drink and wherewith we shall be clothed. We must remember, too, that it is in the nature of things for the strong fellow to beat up the weak, and so the fellows who work find it necessary to bind themselves together, and out of that grow governments and laws; but need is soon found for closer association, and so we have the Guilds of the old days and the Trade Unions of today, and still relative weakness exists and so the inequity of man's relation to man forces itself before the Court of Public Opinion—which Abraham Lincoln said was the highest court constituted. And so the doctors come to you, the Supreme Court of Public Opinion—not in fear, save as we fear the security of your health and welfare being invaded; not in greed, because we know that you know that our self sacrifice and devotion cannot be measured in dollars and cents; not in jealousy, save as we are jealous of our profession and will not tolerate its prostitution; not as false prophets, but as teachers of the truth that you may learn to know and decide and stand back of us. We are, just as the longshoreman is, or as the workers in a vineyard. It is our solemn, sacred duty to safeguard our capacity for work for the needs of today and against the day when that capacity shall wane, and, in so far as possible, to provide ways and means for those depending upon us that they may take their place and do their part in the world's work. Be it longshoreman, or be it doctor, dentist or druggist—what you please, have the moral courage to meet this "pocket-book nerve" sneer squarely—meet it and say, "Yes, we are doing this to protect our earning capacity," and having done that say this;—whether they maintain the present "mean" of \$24.74 as the allocation per person per year for health service and supplies, or whether they raise it to the alluring bait-point offered by the A. A. L. L. to the Michigan State Medical Society (\$2.50 per visit),—no matter if they make the limit of the doctors earnings the sky—and you the goat—there will still remain the political domination of the agencies of healing, and the substitution of the contract doctor for the doctor whose services are based upon love.

Now then, this State Medicine proposition blended with the others, goes just a step further, and I was almost forgetting it. If a hospital, public or private, refuses to come in out of the wet and join the happy throng (laughter), these political bodies have the power under the law to start a little kingdom of their own on the next corner, and then absorb the hospital—or wreck it, if it attempts to operate independently. Doctors, dentists, druggists, nurses, all of these agencies of healing must become panelized

"eventually, so why not now?" I can almost imagine some of the distinguished and dignified doctors lifting their hands in astonishment; I can almost see them shudder as they say in their heart of hearts "Is this man mad?" And then they say to me, "But, my dear Doctor,"—Oh! the trustfulness of those dear men, their innocence, their freedom from guile—"but, my dear Doctor, they can't deny me the right to practice medicine after all my years of study, of sacrifice and service, and besides"—(*this with pride*)—"my favorite hospital has a charter from the State!" Great stuff, that! (Laughter). But it's not worth the powder and shot to blow it to kingdom come! The charter of your hospital is valuable only for decorative purposes, for your charter is a privilege and not a right; it is merely "a scrap of paper," for under the ruling decision of the United States Supreme Court '97, U. S. Reports, page 659, in the case of *The Fertilizer Company vs. Hyde Park*, which modifies the ruling in the *Dartmouth College* case (4 Wheaton Reports, page 518) and makes a charter not a contract from the State but a license; not a right but a privilege, and subject to the police power of the State—just as your license to practice medicine, dentistry and pharmacy is subject to the police power of the State, the scope of which is set forth in the memorable case of *Dr. Dent vs. the State of West Virginia*, 129 U. S. Reports, page 114, in the year 1889. That sounds very erudite, too! (Laughter). I am going to leave with your committee a copy of those bills, and ask them to have the Bar Association of Cook County, or a committee from that Association, discuss them with them. I am sure that the Bar Association will be delighted to act as your legal eyes, precisely as they are doing in New York State and in New Jersey. They will tell you that these bills are capable of depriving you of your right to practice medicine if you refuse to come under the banner of panelization, and they do that in the most insidious way in the world in fulfillment of a threat uttered by a New York Senator proponent of Compulsory Health Insurance before the 11th Assembly District Chapter of the Professional Guild of King's County, when he said, "If you refuse to help make operative Compulsory Health Insurance if it becomes a law, your right to practice medicine will be taken from you under the police power of the State." At that time and at this moment, (because of the fact that we killed the Medical Practice Re-registration Act), there is not in the State of New York a single statute which would make that Act good, but if they had been able to put across that Act they would have had us by the throat, and could have passed any old thing they pleased. The gentlemen of the Bar will tell you that there are two ways of making that threat good; by making it a misdemeanor for a doctor to treat a patient other than as a panelized physician, and thus proceeding against his license, which would be almost *too raw*; or, by providing for the annual re-registration of physicians and vesting discretionary powers in the Re-registration Bureau, which is pre-

cisely the effect of resurrecting and reactivating a section of the old Medical Practice Act which was designed as, and served the specific purpose of, an enabling clause in 1895, to make *de facto* doctors *de jure*, but by changing the fee from \$25.00 to \$50.00 for "re-registering, without further examination, the diploma of those physicians graduating prior to 1895 with the same force and effect as if they had taken examinations," and failing to provide a qualifying "if," "and," "but" or "provided" to the contrary makes it discretionary with the Re-registration Bureau to demand that those graduated after 1895 comply with the requirements for examination; there being no "clear right" to the endorsement of your diploma—and no right of appeal on the merits of the case available, under the "ordinary meaning of the words, which is the measure of the language of a statute" a physician must submit to panelization, or quit. This "reactivation of the complement" makes the Kenyon Medical Practice (Re-registration) Act a legal entity with the status of new law, and serves to tie to the panel the complaisant time-service doctors, and to cast off and destroy the protesting heart-service doctors by denying them re-registration in punishment for fighting such vicious Public Health Legislation as Compulsory Health Insurance, State Medicine, (Health Centers), the National Socialization of Medicine, Medical Practice (Re-registration) Acts Drugless Therapy, Chiropractic, Birth Control, Administrative (tin badge) right of search instead of judicial (search warrant), Bills of Special Privilege for private Narcotic Sanitaria, etc., etc.

Now no number of State laws, however complete and however elaborate, would satisfy the "urge" and hope of "uplift" and the fullness thereof, which did not include the Centralization, Nationalization, Socialization and Standardization of medicine, and so in 1919 Mann of South Carolina introduced a Bill known as House of Representative Bill 10510, that was going to provide for the nationalization of medicine in much the same way the political control of the agencies of education is to be effected through the Smith-Towner Bill. It is really very simple—it is really almost as simple as Senator Davenport's professorial formula that "The cost will be distributed in increased efficiency and good will" (laughter). And it is almost as appalling as the fact that every bit of this fool welfare legislation runs into *big money*, which must flow in ever increasing floods to the Treasury at Washington from the pockets of the tax payers of the various States, and comes back to the Goat in the tiniest of rivulets after passing through the tortuous thirsty beds of Federal patronage sand. When will the average man in the street begin to realize that neither the Nation nor the State, nor a municipality has any independent source of income? That there is no such thing as a Government *gift* or *grant*, and that the disbursement and dispensations of money under these alluring titles is only a "percentage" returned to the contributor—the tax paying public, the GOAT? Why the Federal Government will simply

underwrite the money which the States expend for State Medicine to the extent of one-half, and the price which the State will pay for this paternalistic pat will be the surrender of its State right to care for its sick citizens, and the transfer of the political domination and control of the impersonalized agencies of healing and the cattle-ized, card-indexed units they serve, from the partisan State Patronage Committee to the partisan Federal Patronage Committee. That is *easy*—just like that!

I wonder when the man in the street will know the meaning of the word "Economics"? It means the management of the house, and God knows it is pretty nearly time that the man who pays the freight should know something of the cost and should understand, as I have already said, that no Federal, State or Municipal form of Government has any separate source of income—unless you consider the "conscience fund" (laughter), which amounts to a few miserable thousands, and that anything that returns in any form is just a percentage coming back to the tax-payer—the Goat—for his very great kindness in affording a lot of politicians an opportunity to make a bunch of easy money.

Now there are two reasons why a lot of parties are back of this proposition and trying to put it through. One is that the Foundations have a lot of schools of psychology, philanthropy and sociology, and a lot of psychologists, and statisticians and welfare workers as proteges and graduates and want to give them jobs and the state is a good paymaster. To show you how true this is I will give you an illustration. When we went into the World War that was their opportunity and our fellow citizens were their meat. Men were rejected from the draft because they were too small, or because they had flat feet, or had lost an arm, or had defective eyesight, or had some variety of disease, and for fifty-seven varieties of reasons they were eliminated from the Army. Along comes one of these sob-statisticians and he fine-combs these refugees of the Army and then comes out with this choice bit of statistical humor—"that of the rejected boys in New York State 32.5 per cent. were mental defectives;" that was a lie, of course, but it was necessary in order that an "uplift" gentleman might become the president of a Commission for Mental Defectives. Now New York is a fairly distinguished and a very good State but it is in a rotten position because through that law it has a State Hospital Commission which is legally competent to differentiate between an insane and a sane man, but it is not legally competent to differentiate between the mentally defective or feeble-minded and normal citizens; that is now the function of this other Commission and there are now about twenty-two stone buildings in the course of erection, and then there are a lot of our fellow citizens, touched by the hand of God with mental deficiency, and these poor unfortunates are dressed like scarecrows while hovering about over them are dainty, well dressed social surveyors with nice white caps, who are draw-

ing down their salaries from the State of New York.

The other reason is this,—that those Foundations were all begun in a spirit of what is known as attrition as distinguished from contrition. The "malefactor of great wealth" approaches the terminus of the tiny bridge called life and as he looks back over the span the court of Conscience (in which there are no acquittals) indicts him for his inhumanity to man, and knowing perfectly well that he can't carry his millions away in his shroud, he decides that he will endow a Foundation. Very well—very good, because he is going to give a chance for the children of those he wronged to get in charity what he should have given their forbears in justice, and so he picks out men of prominence in the State and Church who are above reproach, and he entrusts this Fund to them, but you know the higher and more delightful the personality of the man is, the less is the assurance that he is a clever executive; so these excellent members of the Church and State must give way to men more versed and clever in building, who are graduates of a School of Philanthropy, and they are very much like the German trombonist who said he didn't have to *prove* he was a good trombonist—he *admitted* it (laughter). These smooth, oily individuals, dressed ministerially, with that uplifting of the eyes to indicate their "urge," and that they desire to do good to all suffering humanity, and to uplift men to their own excellent standards—or thereabouts, become what is called an Executive Secretary and they are just about as dangerous characters as you can find. They have in the Board of Directors, the Executive Council, and the Vice-Presidencies the names of a lot of people of prominence, and then when I charge them with un-Americanism they look shocked, and they say "This man is unfair—unreasonable"—you know that real ladylike way of slapping you on the wrist (laughter); and they refer me to the men on the letterhead—Woodrow Wilson, the President of the United States, "is he an American?", they say, and then name a few more, and I say what our mothers told us when we were children—"Tell us your company and I'll tell you what you are." Any American, be he President or be he not, who contributes his good American money and good American name without finding out who he is traveling with, cannot be heard to complain when his name is associated with a man who will write an editorial justifying the sinking of the *Lusitania* (applause), who will write the "Dear Gene" letter to Debs in prison, or the men who would try to wreck the needle industries of the country while our nation was at war, or the men and women associated with the Rand School for socialism in New York, or the men and women who are the editors and owners of the "Crisis," the "Messenger," the "Nation," the "New Idea" and the "New Republic." (Applause.) These sheets are teaching De-Americanization with every issue, yet these are the names that you will find emblazoned and embrazened as officers in the organizations which are aiming to put across this type

of wasteful, socialistic legislation in this country of ours.

This is not the doctors' fight: It is the peoples' fight. Somewhere in this hall there is the family doctor of the man who is at the head of Marshall Field's; somebody else is the family doctor of the man who is at the head of the other large department store on the next corner. You know that these people love you just as dearly as my people love me, and you know, just as well as I, that an appeal coming from you will be honored by them because of the love they have for you and the trust they have in you, and you say to these gentlemen, "You occupy a whole page in the daily newspaper and two on Sundays,—will you give me an opportunity with your sanction to talk with your advertising man"—you understand the bone and sinew of the newspaper is not your three cents a day, but the advertising—"direct him to listen to me for a few minutes for I have something to communicate to him from the family doctor," and if he will give you one little inch-by-three in the heart of his advertising space the newspapers will come to you within a week—not like in the City of Milwaukee where the perfectly sincere and honest effort on the part of the medical men was distorted at the direction of some bureaucrats. We did it in Kings County—because I was connected with one paper before I practised medicine they would publish my stories through their regard for me, but we could not get a line in one newspaper until they found out the election returns in 1919,—you've all heard the story about how somebody "told the sexton and the sexton tolled the bell" (laughter). Well, what I had to say got into the advertising window and then we got all the space we wanted without a blue pencil, because we are no longer a theory but an institution and a cause; "what men have done men may do." It is your business and mine to invite the voting public to take a hand in the game in order to insure a square deal all around; and the lay press is the great American teacher. *We must go to the people with the facts; an informed American public never went wrong and never will.*

It is true that the spectacle of dignified medical men in Illinois coming into public life twenty-five years ago in defense of a principle was sufficient to change the result in a State election, but it will not be sufficient now. If every doctor were in his scientific society, (which he is not), and if every society was a unit—(which they are not), they could not prevail, alone, against the well organized, well financed, absolutely unscrupulous forces of unrest which are exploiting this socialistic Public Health and welfare, stuff. Put us all together and we do not represent the voting population of a city of the second class, but get us out among our people *who have the votes*, and who have very definite ideas about the quality of self-sacrifice and devotion to them and theirs which we have always manifested, as well as our absolute dependability in peace and war, and we can change the complexion of a legislature in record time and

party affiliations will be no bar. Let us not waste our time in dignified, elegantly phrased resolutions of protest, presented at the Capitol by our distinguished doctors with their usual courteous manner, because they will float gracefully into the waste-basket as soon as these dear men leave for home (laughter), but the voice of the people can be heard the State around and the impression of their votes sinks deep into the consciousness of legislators and their political leaders and advisors, and they will Stop, Look and Listen! before they commit the State to a wasteful policy of Public Health uplift at the behest of the Apostles of Unrest, through Compulsory Health Insurance, State Medicine, Health Centers, Birth Control, Drugless Therapy, and the rest, and before they attempt to enact the fulfillment of a threat of reprisal upon the people's alert agencies of healing through a Medical Practice (re-registration) Act, which is ostensibly prepared for the "uplift" of medicine, but which is really designed as a legislative club to beat the men and women of medicine *into* submission to panelization, or *out of* the practice of their professions.

The best medicine in the world is knowledge of the facts. In our work in Kings County our doctors, dentists, druggists and nurses were supplied with the facts of our campaign, in pamphlet form, charts, snappy cards and newspaper stories; all these cost money, a little from the humble and more from those whose position suggested and whose pockets afforded generosity until the dues began to come in and we were really functioning. The New York League for Women voters released a news article a short time ago stating that these Guilds of ours were involved in a lobby exposure, and hinted at a slush fund of a million dollars (laughter); I wish with all my heart that somebody *would* get a slush fund together that would equalize the fight between the moneyed Foundations back of this fool legislation and the Agencies of Healing who have been spending their own money and time and energy in building up the Medical Salient of the American line of defense against this socialism and this radicalism. (Applause.)

It was inspiring to see how the doctors and the other medical citizens took hold. One of the doctors telephoned me that he was able to get some slides in fourteen moving picture houses in his particular Assembly District, and the slides read—"What do you know about compulsory health insurance? Ask your Doctor, Dentist and Druggist: *They know.*" How would that look in the heart of a department store newspaper page next Sunday? Somebody else suggested that since the magazines in our reception rooms were out of date anyhow (laughter) we might replace them with copies of "The Menace of Compulsory Health Insurance" and such literature, and all these things helped.

We took the stand that Compulsory Health Insurance was as incapable of constructive amendment as is a rotten egg, and the people constructively amended the legislature for us. Their action imposes a debt upon us which must be paid by directing our

attention to a real solution of the sickness problem; seeing to it that thorough, constructive legislation and more efficient and expansive administration of our hospitals, laboratories and dispensaries, the advancement of medical science may be brought closer to the sick citizens of moderate means, that they may profit by the more rapid restoration to health, that their freely chosen physicians may profit by a broader grasp of the patient's condition, and the State benefit by the prompt return of the individual to economic usefulness.

Now I am going to quit, but before I quit I am going to leave you a small part of what has been largely responsible for the sacrifice I have made for the profession that I want to see retain its standing of sacrificial sanctity. It is a little thought that particularly applies to two types of medical men: first, the man who has plenty of money and "who should worry;" "If they put over this fool kind of thing in this country I'll get out of medicine and go out to the farm;" and then the other kind of men—like Emerson's Mouse-trap Man, whose surgical skill or superiority in special lines of work makes them almost indispensable; and, too, that indolent type of man who does not think it is going to hit him and "what should he bother about?" It applies, too, to the people we love and serve, and to the Legislators who are charged with the duty of making our laws, and to all of us whose duty it is to build, not for today or tomorrow, but to build for all time; not to build selfishly for ourselves but for the others who will follow us—as did the men and women who built for us in those troublous times when this glorious Nation was brought into being: the man who wrote this was a man whose spirit must have been at home among the stars:

"What if I build for others and the walls of the building stand

Long after I am forgotten by the dwellers within the land;

Long after the buildings have crumbled, which were builded upon the sand?

"What if I build for others and the building shelter me not;

And within the home I have builded, I shall have no part or lot;

And the Dwellers who make their home there, thro' all time shall know me not?

"Yet, when the years shall have faded, and beneath the roof-tree's shade,

The children of generations in their childhood sport have played;

And have passed from under that roof-tree and vanished into the shade;

"Some Dweller beneath that roof-tree, thinking of when it was new

May say, as his thoughts turn backward, keeping its age in view,

That 'The Builder who built this building builded better than he knew.'

"And I, tho' I may have passed onward, hearing the Master's call,
May know, tho' it may not matter to me what the building befall,
That 'tis better to have builded for others, than not to have builded at all."

DR. EDWARD H. OCHSNER: One of the chief purposes of this meeting, and the chief purpose of the appointment of our Committee, was to get this "fighting doctor" from Brooklyn to Chicago, and I think you will agree with me that we have scored 100 per cent. plus, if I judge aright by your applause.

We are twice blessed tonight or thrice blessed, and our second blessing is another member of the clan of Henry. He is the Secretary of the American Association of Retail Druggists, and his friends tell me that he knows to a nickel just exactly how such laws as Dr. O'Reilly has cited to us would effect every retail druggist in this broad land of ours.

I take great pleasure in introducing Mr. S. C. Henry, of Chicago.

MR. HENRY: Mr. Chairman, Ladies and Gentlemen: You know it is always embarrassing to a speaker to have the gentleman who introduces him say flattering things of him, and it is especially embarrassing for one of my very humble position in life to be called upon to follow such a speaker as you have just heard.

I want to say to you men and women here assembled that, speaking for the pharmacists of the United States, I endorse every word that the previous speaker has said to you. I am sure that we have all been interested and instructed by the comprehensive and intelligent analysis our good friend has made of the case which is directly before us. Now when I sat over here listening to this eloquent address by our friend from New York, I began to imagine that this was not my lucky night. Like the chap who said, "My brother is always lucky but I never was. My brother Bill walked down the road, picked up a horseshoe, and took it home and hung it up and the next day his wife left him. Brother Bill always was lucky. I went out and gathered up an armful of horseshoes and hung them all over the house but my wife is still there." (Laughter and applause.)

Now just a few words about this Compulsory Health Insurance proposition. You physicians and dentists and we pharmacists have been hearing much of Compulsory Health Insurance for a number of years. It is true that a few of us, principally those whose duty it was to analyze these bills and combat them, have informed ourselves, have been interested in the subject and have endeavored to bring before the great mass of our fellows the true facts as they are contained in this proposition. I may say to you in all sincerity that in many years of legislative experience I have never had to combat any legislative

proposition which in my humble opinion was as iniquitous and fraught with as much danger, not only to our professions, yours and mine, but to the great mass of American people, as is the Compulsory Health Insurance proposition. The American Association for Labor Legislation—my goodness, men and women, we might well exclaim "Oh labor, what crimes are committed in thy name!" What right has this bunch of political grafters and reformers and philanthropists to come before the people of this country and in the name of labor propose something which you and I and every other intelligent man and woman in the country knows is not in the interests of labor, but is absolutely contrary to its best interests. They come to you, as our friend here has shown you tonight, with a proposition which purposes to do something for them, but down in their hearts they know as we know that the whole plan and purpose is to do something for the people who are proposing the measure and to set up a machine which can be used for their own selfish purposes. And then there is another thing which we know which perhaps the general public does not know, and although our good friend analyzed it, he perhaps did not go as far as I am ready to go now, but we know as practical business men that not 40 per cent. or 60 per cent. or 20 per cent., but 100 per cent. of that amount is to come out of the pockets of the laboring people. Why, it is ridiculous to imagine that any state could demand of the business man that he turn over to the state for the purpose of insuring his employees a certain amount of money, and expect him to get that money from any place in the wide world but out of that business. While it is true that the employer is called upon to pay 40 per cent. of the amount, plus his taxes, his share of the tax which will be levied to pay the state's portion, it is equally true that that amount will come from the people, and consequently that amount is charged back to the persons in whose interest the plan is proposed and, unfortunately, only a small percentage of it finds its way back to the ones who are supposed to be protected by this splendid scheme which has been worked out by these so-called reformers.

Do you know, my friends, speaking from the viewpoint of the pharmacist, that if compulsory health insurance is adopted in any of the states or in the nation, and carried out along the lines upon which it is planned, that it means the absolute elimination of 75 per cent. of the pharmaceutical business carried on by the pharmacists of the United States? Now those are not mere idle thoughts; they are carefully calculated figures, and I do not want you in thinking of it to think of the things that you sometimes see in the drug store. I am speaking of pharmacy, and I say that 75 per cent. of the legitimate pharmaceutical business carried on by the pharmacists of the United States would be absolutely eliminated by such a proposition. Now, all of this is proposed in the interests of the "dear public," the "laboring man." It is proposed here in the United States of America

and I am here to say to you as an American citizen, that the very proposal of such a scheme is a crime and an outrage upon the good name of the American laboring man.

This thing has but three angles, my friends—it is simply a question of the laboring man, the state and the profession. In the very beginning of compulsory health legislation we were, unfortunately, faced with a condition which I believe now is rapidly disappearing; namely that the laboring man, as such, was for a time fooled by this proposition. I think it might be said with equal emphasis that the medical profession was to a certain extent misled by it. But now in many lines the laboring man has been led to see the falsity of the proposition, and I am mighty glad to know that the medical profession is so solidly against it. The pharmacists of the country have been from the very beginning absolutely opposed to it. But it is all right for us to be opposed to it. It is all right for us to have meetings as we are having here tonight, and pass resolutions perhaps, but that will not accomplish the purpose which we are seeking by this meeting to accomplish unless we—by that I mean all of the professions here represented—unless we grasp the full significance of the situation which is directly before us, and see to it that the public is informed truthfully and accurately as to the workings of such a law. I want to say to you that the passage of such an act, in some of the states at least, is extremely probable. We have 42 states with the legislatures in session at the present time. My office is constantly being kept informed regarding the various bills which are being introduced, and I know to a certainty that there is a determined and a well organized effort to put across this legislation in many of the states, and the one thing against which we have to guard—and when I say that I mean my own national organization—the one thing we have to guard against is the adoption of such a measure in any of the states, because once it has wormed its way into any of the states it will work its way into the other states regardless of anything we may do to prevent it.

Now, what I wish you would do here tonight, after listening to our good friend Dr. O'Reilly and what the gentleman who is to follow me has to say, is not only to adopt some resolutions, but I would like to see you take some definite and decided stand. Begin here tonight some measure to carry this proposition to the people of the state. Organize in some way so that you will get into the newspapers of this city and other parts of the state the information which the people of this state should have regarding the iniquitous nature of the proposal. I think if this meeting adjourns without doing some such thing we will have missed the real purpose of the gathering.

You know, I often reflect upon my own shortcomings and yours, and other people's, and one cannot help but feel in thus reflecting that we as a class of citizens very frequently fall far short of our duties in that we will not sufficiently interest ourselves to get into the hands of the people and see that they

are properly informed regarding those things which so directly affect us as does this particular proposition. We are all too likely to allow the work to be done by some one else. It is all too natural for us to believe that perhaps the picture which is painted before us is somewhat over-colored. We are all likely to trust somewhat to luck, that these things will not occur. Then, too, I think that we sometimes are like the young man who was making love by the seashore. He proposed to his lady love and she accepted him right on the beach, and then after she had accepted him they remained silent for a while and finally she looked down at him and said, "Charlie, aren't you going to kiss me?" And he replied, "I want to but I can't, my mouth is full of sand," and then she said, "Swallow it, you boob! You need it." (Laughter and applause.)

Now, my friends, that is what *we* need (laughter). We have to get away from this idea that it does not look right for us to be trying to educate the people. We have to get a little more grit into ourselves and our people and go out and fight this bill. Not only for our own protection,—that, I say to you, would be enough in itself, but we have in addition to that the certain knowledge that in protecting our own interests we are also upholding the rights of the people of the country as a whole.

Now, I am sure, you do not need any further analysis from me, and I will just leave with you the thought that I expressed a moment ago that out of this gathering tonight I hope will come some sort of an organization and cooperation of the forces which are here assembled that will take hold of this thing and see it through and not give up the battle until it is absolutely won. If we will do that, I know that we of Illinois have nothing to fear from the present legislature. I thank you. (Applause.)

DR. EDWARD H. OCHSNER: You see how right I was about our second blessing. One of the purposes of this meeting was to cement together the three allied professions. We will now have the pleasure of hearing from the gentleman who was described to me this evening as the most beloved of all Chicago dentists, Dr. Don M. Gallie, Member State Committee on Legislation of the Illinois Dental Society. (Applause.)

DR. DON M. GALLIE: Mr. Chairman, Dr. O'Reilly, Ladies and Gentlemen: I think I can go my pharmaceutical friend one better in the way of a flattering introduction. I am sure that every one here is intensely interested in the presentation of the subject by Dr. O'Reilly tonight, and I am sure that most of you, like myself, are amazed at what he has told us, because I know that the great majority of those present are as ignorant of the ramifications of the proposed legislation as I am, and so instead of taking up much of your time I am going to make my remarks very short, because I believe we will profit by asking Dr. O'Reilly some questions about this proposition. He has told us that this has been presented before some ten legislatures throughout the country

and that only by accident was it prevented from being passed in the State of New York, not because of the work by the doctors against it, but because the political gang was not yet ready for it. No one can tell when it will be presented in our legislature and we are not prepared to combat it because we are not familiar with the provisions of this proposed law. It is said to be for the benefit of the laboring man, but any one who has read anything on this subject knows that the laboring men are against it. They do not wish to be classified with the poor and poverty stricken laborers of Europe. It has been tried in Germany and England and has been anything but beneficial to the working men and certainly disastrous and unfair to the professions.

Dr. O'Reilly has told me something about this law, how it would regulate our fees, and the kind of work we would be able to do. As an illustration, he asked me what I thought would be a fair price for filling a tooth, and I wanted to make out that I was a moderate priced dentist and so I said \$3.00, and he said, "Get off your high horse, the price will be 39c." And when I stop to think how my professional associates are doing their best to clear themselves of the indictment, rightly or wrongly placed upon us by our medical brothers, and are trying to do their best for the people at all times, and then along comes the state and says you will have to fill teeth for 39c, I can understand just what the condition of the mouths will be under such circumstances as regards foci of infection.

As I came into the hall this evening I met a colleague who has a brother practicing in Germany, and he said, "I wish I had known just what the object of this meeting was, because I have literature that would show exactly how it works in Germany." His brother receives 3 and 5 cents for office calls and 15 cents for calling on a patient outside. So, knowing the workings of this law in Germany and England, it is simply folly for any one to stand up in this land of plenty and riches, and advocate the passage of such a law. I recently read an article which was published in January, 1919, in which one of our medical colleagues said, "Isn't a strange thing, that since 1896 not one single thing of prime medical importance has come out of Germany and Austria? I beg your pardon. Salvarsan, and that was a laboratory discovery. It was discovered by a man who knew absolutely nothing about the practice of medicine; a graduate in medicine, yes, but he never practiced a day." And another noted medical man in the city of Chicago, in discussing this proposition before the same body, the State Legislature of Health Insurance Commission, made this statement, which to me was very interesting: "I have recently been through England, Germany, and all of Europe. There is not a civilized country on the face of the world, where the intelligence of the average physician is as low as it is in Germany. In the little hamlet, in the big clinic, in the big city and among the people. Why? He makes his bread and butter at the *Krankenkassee*, and

no place else. He has no way of making a living, except under the insurance act. A mark a visit, and less. The same way in England. What was the condition of England after it had been in the war but a few months? What department necessary to the Army failed first in England? The Medical Department, because there were not enough physicians to properly equip the Army. Few doctors in England are able to earn a decent living until they are 45 years of age. How could they, with the laboring class, the majority of them, getting ten and twelve and fifteen shillings a week and raising a family? Talking to the Surgeon-General of England, personally, I was informed that England had only one doctor to a thousand men at the front. I happened to be a member of the surgical society in this country to which England first appealed for help. He said: "For God's sake send us surgeons." They had one surgeon to a thousand men. We provide our Army with 7 to 1,000."

This certainly shows that this freak law has not been a success in Britain. Noted British statesmen have talked against this measure, saying that it has been anything but a success, and those who have studied it believe it will be even a greater failure here. Read the bill, which says that the employer will contribute so much and the men so much, but it means that the slacker will continue to be a slacker and the ambitious man will have to pay for it. I am sure that we cannot be in sympathy with this movement and we should know about the provisions of this bill so that we can combat it. I think that as soon as possible we should each and every one have a copy of the bill and get busy with our different medical, dental and pharmaceutical associations, and as the member of the Illinois State Dental Society, and the National Dental Association, which has 30,000 members, I feel that I can pledge to you the support of these organizations to combat this measure. I would like to see some concrete movement taken here tonight, so that these different organizations can get busy, and I am sure that with the influence which the family physician has and which the dentist has, and the close association between the corner druggist and the people in his neighborhood, it will not be difficult to convince the people and the legislature that it is a bad law. I would like to have Dr. O'Reilly tell us some more of the details of the provisions of this measure. I thank you. (Prolonged applause.)

DR. OCHSNER: Now I am sure we have all enjoyed our third blessing, and I will now ask Dr. O'Reilly to come back and give us any further details that he cares to—Dr. O'Reilly.

DR. JOHN J. A. O'REILLY: I don't wonder you all love that last speaker. He talked right straight from the heart, and the man who can do that is of value in any community. (Applause.) I don't get outside of the "three mile limit" myself. I don't deal much with statistics because I hate them. I will recite a little thing I did not go beyond the three mile limit

to get, because the gentleman came and told me after making a visit to Germany. A gentleman in our profession was pretty nearly down and out under this "wise method of compensation," but finally he had a vision of fortune smiling on him because one of the royal princesses stopped over in his town and then she had the ill fortune, (which he thought was his good fortune) to contract pneumonia and he was called in to serve her, so he saw something in the money way. Well, he treated her faithfully and well, and she got better, and then he began to think in large round numbers, and when she asked him what his bill was he said, "Under the Compulsory Health Insurance System I cannot charge you more than so much, but" he said, (and you can see how low the poor devil had gotten), "my wife would not hesitate to accept some of your dresses." The princess gave the wife some of her dresses and then she gave the doctor an "honorarium"—that is such a beautiful word! The honorarium was equivalent to about a thousand marks, which would be worth \$25.00 when the mark was worth the powder and shot to blow it to kingdom come, but now it is worth a postage stamp. Then that doctor's medical society sat in solemn judgment upon him and suspended him from the practice of medicine for six months for accepting this munificent sum. (Some function for a medical society!) Now I have that story from another medical man and you have to take it from my lips *cum grano salis*; whether it is absolute truth or not, I do not know. But this one is absolutely true: We have had to listen to a lot of drivel about how this (Kultur) God-given proposition of compulsory health insurance was working wonders in behalf of the profession in Austria. Now you know that Austria did not suffer anything like France did in the late war, because she did not lose a cathedral or a plugged nickel so far as destruction of property was concerned. The doctors were receiving under Compulsory Health Insurance,—because I have it from their own letters sent to me and to others, stating that they were earning the equivalent of \$4.39 per month in American money, and the letters were enclosed in a letter from the New York Committee for Medical Relief in Vienna, and they were panhandling letters from those poor doctors in Vienna asking us for alms. But finally the Austrian doctors woke up to the fact that God helps those who help themselves and they struck, as you will all remember.

Now we have heard a lot about this being a labor union movement. I organized 22 out of 23 assembly districts and the reason I did not organize the twenty-third was because 700 doctors got together in the lower districts of New York to organize a labor union. They asked me to address them and in the course of his remarks the presiding officer said, "Dr. O'Reilly is going to talk to us; he is a good talker as we might expect, for he is half a Jew anyway," and I said, "The doctor is not so far wrong anyhow, because tradition has it that Ireland was first peopled by one of the wandering tribes of Israel."

(Laughter.) "The doctor has told you what you should do, I will tell you what you *must* do—you must stop, look and listen and cease your efforts to organize a labor union because over in my home town I have an organization which will crush you to a pulp if you try it. You stop until the New York County Medical Society has another chance to come through clean, and if they do not do it, you go through with your labor union and people will have the right to charge your county medical society with the moral responsibility of striking the bar-sinister into the shield of medicine with the organization of a labor union in New York City; subsequent to that the New York County Medical Society came through clean with a vote of 300 to 3 against compulsory health insurance and there was no union.

About the 39c for a tooth-filling which Dr. Gallie asks—when I started to study health insurance, the milk of human kindness had not yet curdled in my bosom and I actually had a tender spot in my heart for these "uplifters," because I thought they might have been of the elect of God and that I might have been mistaken, and so when I analyzed their propaganda of 24c a week my calculations of cost were shockingly conservative and I figured reserve and guaranty as a nominal 30 per cent. instead of the legal 50 per cent., and so I found then that instead of \$24.74 for health service and supplies, there was only \$2.42. You know you can't buy a dollar's worth of ham and eggs for a dime unless the purveyor is the driver of a garbage wagon, or he is a thief, or he is a "nut" (laughter); unless you can satisfy yourself as to the absence of those three things you have no right to consider that he is merely a malefactor of great wealth trying to save himself the reproach of dying rich by giving away his substance. Neither can you buy twenty-four dollars worth of health service and supplies for \$2.42; in the State of New York there are 13 institutions for the insane and they take care of 34,224 patients and the State of New York can buy its supplies wholesale, and they don't have to bother about the middleman or the druggist, yet in 1917 the cost for health-supplies was \$1.30 per person per year, so you have to deduct that from the \$2.42, which leaves you \$1.12 for all the doctors, dentists, druggists and nurses, specialists services, sanitarium and dispensary and hospital, etc., so you can see that 39c for a tooth filling would be all we could really afford to pay, Dr. Gallie. (Laughter.) Besides, we have to provide for four-fifths of all the births in the State of New York for 8 weeks or 56 days of maternity care. The propagandists said my first pamphlet was extravagant! Because I calculated cash benefits for the whole of the workman's nine sickness days, whereas this does not begin to operate until 3 days have elapsed, then I began to realize that these propagandists believed the poor dear workingman they were going to "uplift" were "crooks" who would be apt to malingering for 3 days and the average doctor would be apt to help him do so: thereafter my speeches and writings and calcula-

tions showed no consideration for propagandists who did not know the American square deal. Here is a little feature of the power of the medical foreman of the panelized doctors:—We had a gripe epidemic in New York last year and the year before, as you had out here, and those gripe germs certainly are busy in the early stages, but after the *third* day the germs must live on their own excetra which has swamped the patient's vital fluids, and they will have all they can do without bothering the patient, but they have already saturated that patient with poisons and the only kind of blood he has is drunken blood, which is why his hair falls out and why his nails become brittle; the "fund" has a "medical officer"—one "who deserves well of his political party." "There is Dr. O'Reilly," for instance, "who would like to be one of those medical foremen in charge of a gang which God forbid." And then I go to Dr. Ochsner here, for instance, and I say, "You are treating Smith," and Dr. Ochsner says, "Yes,"—deferentially, mind you, because if he doesn't he'll get *his*—and he says, "Yes, sir." Then that law permits me to say: "You send Smith back to work tomorrow." I am working for the fund; of course, it's only 1,500 dollars a year—and what I can pick up, and I must stick by that fund. I say, "You send Smith back to work tomorrow," and Dr. Ochsner says, "I can't! if I do I am sending him back to death or to worse than death,—to chronic invalidism a year from now. To send him back to work now means sending him to a state institution suffering from a chronic disease of the heart a little later on, adding him and his family to the poverty of the state." And then under this bill I can say, "That is nothing in my young life, you send Smith back to work tomorrow; his insurance stops tomorrow and your fees stop tomorrow, and Dr. Ochsner, you jump through that hoop." And the law gives me the power to make him jump through that hoop.

I spoke to you of the deficit. Where are you going to get the balance? Off a tree? Not at all. What are the people going to do if they tolerate this thing, if they once get the law in the books,—jump the workingman's premium to \$75.42, which is 13.6c of every dollar he earns, or they are going to send along the deficit to the tax payer—the goat? Bear this in mind, that in the State of Illinois that \$50.46 for the 2,594,000 estimated workers under the census of 1920, means over \$130,893,240.00 a year for you to make up to save the State of Illinois from dishonor. Now the inevitability of this deficit was recognized and provided for in section 11 of Article II of the Bill which provides this—"if the funds be unable to furnish the whole or any part of the benefits provided in this section then there shall be paid the *cost*," (get that, that does not mean fee—that means cost),—of service and supplies. Not a tiny little bit of a word as to where this deficit is to come from, but a wide open door for a deficit bill every year to save the state from dishonor. These propagandists will mortgage their soul for you if

you will help them push the naked bill through, by compromise,—the curse of 'medical society politics. Don't worry, they will furnish clothes (amendments) for the skeleton if they get it through. One of the bills embraced the workmen—and their families.

Now I want to charge the American Association for Labor Legislation with direct dishonesty. They had an original bill which provided that this bill be applied to all workmen. We have a strange bunch of medical men in New York City—they are the frock coated clan, silk hatted and ultra-ethical, classy men of the profession who decorate the Academy of Medicine. One of the high priests is Alexander Lambert, former President of the A. M. A., who tried to betray it in 1919 and got what was coming to him from you gentlemen of Illinois; they said, "Tu" (three times), "this must not be because this also applies to our clientele," and then these efficiency agents said, "Let's stop, look and listen, these men are very important to us because we depend upon them to play the medical politics, and so we must insert something that will show the benefits of this God given thing to those earning \$1,200.00 a year or less. "Now," said these sacrosancts, "Now indeed is revealed to us the God given movement," and so they compromised and then, when they had compromised on the bill, and compromised themselves and lost the confidence of the rank and file, that section was withdrawn and today the bill excludes only agricultural laborers and people who belong to the Christian Science Church.

Now, another evidence of dishonesty. They began to cut this bill, and they cut and turned and trimmed and embellished it in every possible way and these uplifters tried to kiss it through, and they finally got a bill which, in 1920, they admitted was the best health insurance bill they could devise, and that same year they went across the river to New Jersey and introduced one of the older bills with additional bad features and that is active dishonesty if anything is.

One of the choice bits of propaganda is this: "The medical societies are the ones who initiate the fees and who control and direct methods. Well, a woman came over here from London and she was a wise lady. She knew a lot about labor—she represented labor in England, so she said, and she spoke in glowing terms of the Davenport Bill and compared it with the English bill and said the thing that stood out prominently was the fact that the medical societies directed the work. If she is not a better labor leader than she is a reader of King's English, God help the King! (Laughter.) Here is the law, "the medical societies may submit schedules of fees and modes of compensation"—now that sounds good and I don't see why these poetic doctors are so het up about it, really; then it goes on to say, "The Bureau may adopt these fees and modes of compensation"—now that sounds good, too, but, then it winds up with this little bit of legislative humor to lighten the cares of our elected men, "or, the Bureau may adopt such *other*

schedule and mode of compensation as the Bureau may decide!"

Now, I want to give the lie direct and then I am going to ask you to ask what questions you wish. I am going to give the lie direct to some of these people with relation to the attitude of the medical profession towards this work. That they shall have anything to do with it is not contemplated for a moment, because the one who is going to determine what we may graciously be permitted to prescribe for our patients for their particular illness is not the panel doctor at all, but the Medical Foreman in charge of the fund, who has the right to say whether or not my prescriptions may be filled at the corner drug store. That is precisely the condition a doctor is compelled to submit to if he goes in under the panel, and he must go in under the panel if he exists at all. Now are there any questions?

DR. GALLIE: How does the law provide that doctors shall be selected to serve the people?

DR. O'REILLY: They are to be selected by your medical society. That is what it is for—not to waste time on scientific business, not at all. Then Dr. Gallie will not go into that business. All right. Then he will go up to Albany, or down to Springfield, and he will present his credentials and his two dollar fee and his photograph and then they will say, "Tut, tut, naughty, naughty, doctor, I don't like the way you wear your hair, and I do not like the speech you made in Chicago where you pledged the cooperation of these doctors, and we can't allow you to be re-registered this year. (Laughter.) We will do the best we can for you, doctor dear; you can take another medical examination"—and do you know what a swell chance you have of passing it today. (Laughter.) "Doctor, please mention the structures that pass through the foramina of the sphenoid bone"—just like that, and if you fail in that you have the gracious privilege of passing a second examination after you go to college for six months. Then you say, "I will take the matter to court." Very good. I have not enough sporting blood in my body to cover a three-cent piece, but I'll bet you a \$10.00 gold certificate against a United Cigar Stores' certificate that you will be beaten to a pulp before you get into the court. In 1889 they passed a registration act in West Virginia which gave discretionary power to the registering board to determine whether you might practice or not, I don't know whether "the Lodges spoke with the Cabots and the Cabots spoke only with God" or what it was, but in the case of Dr. Dent versus the State of West Virginia they denied him the right to practice, because, forsooth, the man behind the desk did not consider the doctor's college, in another state, "reputable," the doctor had practiced for six years in that vicinity, but because he had not practiced for ten years, he was arrested and taken to jail, and the case was carried to the Supreme Court of the United States, and the Supreme Court decided the scope of police power embraced that act, and Dr. Dent, of West Virginia, served his time in jail.

When I said first that I was against the Medical

Practice Act, I was informed that I would be crucified, and I said, "Doctor dear, I am not worthy so noble a death but you go right ahead and get the cross ready." (Laughter and applause.) On the floor of the Assembly, when they made the statement that the state society was for it, an assemblyman from New York got up and said, "Yes, I know that, but the state society is not the whole show. It's a bad bill and the rank and file and the people in the state don't want it"—and they beat it out of its booth. (Applause.) That is the Medical Practice Act you are going to get. You may not get it now because they are so busy in the State of New York, but it is coming, it has to come or J. B. Andrews is going to lose his job as Secretary, and his wife as assistant secretary, (of the A. A. L. L.) and they have to put it across—their jobs depend upon it.

DR. GILLIS: In what state will it be introduced?

DR. O'REILLY: I believe in New York and New Jersey, but I don't know over night. Twenty-four hours before it was introduced last year I telephoned Mr. R. J. Caldwell, who was a member of the Executive Committee of the American Association for Labor Legislation, and asked when the bill would be introduced and he said he didn't know, and then I telephoned to J. B. Andrews and asked him when, and he said he didn't know, and he lied, because at that moment the bill was on its way to Albany and the next morning at 10 o'clock it was introduced. So you will not know until it is sprung on you. Preparedness is the thing you want now and now is the time for organization.

DR. HAYDEN: Just what form of work should be attempted in Chicago?

DR. O'REILLY: If I had an independent fortune I would go from Maine to California trying to beat this legislation, but I have not—but if I lived in Chicago I would want to get out and go to the dentists and doctors and pharmacists in their assembly districts, where the votes are, and organize them. I would send an invitation to every doctor, dentist and druggist in the city to meet me on some certain night in the democratic or republican assembly headquarters, and I would get the headquarters without cost, too or they would find out next election time what it really cost. I have sent out invitations to every doctor and dentist and druggist in a certain district and when the time came for the meeting I have found three men present, I talked to those three men just as earnestly as I am talking to you tonight, and they went out and got others and I would return and talk to twelve and then to 48 and I kept on until I got them up near the 100 per cent. mark, and even then men who had not gotten into the guild, we kept bombarding with literature all the time, so that some would stick somewhere and they would float in. Instead of doing damage to scientific societies the practical effect has been an increase in the membership in: the county societies of doctors, dentists and druggists, because they are beginning to realize that the doctors in these societies are human beings, after all, and they are glad to fraternize with them. Then I

would go out into the assembly districts. At times, I was very depressed in the beginning, and then I struck a group in the 9th assembly district chapter and they went around with me and lent their inspiration to the organization of these other districts, and the same thing will happen here. Your druggists can talk to the people over the counters of drug stores and the dentists at the dentist's chair—get 'em when they have a gag in their mouth and you know they cannot help but listen (laughter) and it has to sink in, and in that way utilize it and your patients will soon begin to ask you questions. Last November men in my assembly district asked me whom I wanted them to vote for, and remember I am not in politics. You can pass resolutions until you are black in the face, and submit them down at Springfield, Illinois, through a group of distinguished doctors, and as soon as they make their train the resolutions float gracefully into the wastebasket, but the people's voice is heard the state around and their votes sink very deep into the minds of the political leaders and advisers and they are taking no chances on having these people keep them home next year, and they are going to submit these bills to you and they will not railroad them. We opposed Compulsory Health Insurance and Chiropractic as well. It took Governor Smith five seconds to veto the Chiropractic Bill when it got to him. Why? Like taking postum, there's a reason. Shortly before that some one went to him and said, "for God's sake lay off the Compulsory Health Insurance Bill, it raised the devil in King's County last November." (Laughter.) That is language you don't need a phonograph or a megaphone to hear. Following out that line of thought, it has proved its moral in New York County and we went up to Albany in 1920 with 62 counties in our vest pocket, and they listened, and you can go to Springfield with 102 counties in your pockets and they will listen. In New York with our organization and guilds of doctors, dentists and druggists in every county of the state, we have had the help of the Bar Association. That came around because at a dinner in Hakensack, N. J., the lawyers said, "Dr. O'Reilly is right; you doctors are all babies; you don't know. We do—that is our business, let us be your legal eyes."

These people say that they want to help the medical profession and then they proceed to pass, or insert a wedge into the medical practice act to act as a provision of the Birth Control scheme because they failed to get a birth control law. These uplifting people did that very trick. They withdrew the only thing that acts as a check on birth control with some doctors and people of the Margaret Sanger type, and in order that they might have the support of the birth control league they slipped it over and our state medical society almost became the sponsor of birth control in New York State.

Second thoughts are always best, if any question arises in your mind later, please make it your business to communicate it to Dr. Ochsner and the members of his Committee.

Let me show you the value of organizing doctors, dentists and druggists as medical citizens. In our 23 assembly districts we had chapters, with a chairman for each chapter; the county society arranged a symposium on compulsory health insurance with one proponent, Alexander Lambert, M. D., and two compromisers, Drs. Gaylord and Medill as speakers—no one for the opposition until the assembly district chapter chairman demanded and insisted, as evidence of fair play that the opposition be heard and Dr. Heeve, of the homeopathic group and myself were reluctantly designated; I called spades—spades and defined treachery in high places and you westerners carried the spirit of Oct. 21, 1919, to New Orleans, Apr. 27, 1920, and saved the honor of the A. M. A. from prostitution at the hands of its committee on public health and instruction, which, by the way, may be expected to play up state medicine (health-centers) in June even in the shadow of Fanueil Hall. That meeting of Oct. 21, 1919, is dear to me for one other reason,—it made possible my meeting today the engineers of that coup in New Orleans, last April, which put the A. M. A. squarely on record "against compulsory health insurance, state or nationally controlled."

DR. EDWARD H. OCHSNER: One of the purposes of this meeting was to take some action which would bring about definite work in this respect. One of the speakers has said that resolutions do not amount to much for the general public, but resolutions do amount to something for the purpose of expressing the opinion of the meeting, after having heard something from the members of the medical, of the dental and of the retail druggists associations, I should be very glad to hear from the floor a resolution endorsing the opinions and ideas that have been expressed here this evening.

DR. HAYDEN: I move that the representatives of the Chicago Retail Druggists' Association, the Chicago Dental Society and the Chicago Medical Society go on record as being unalterably opposed to State Medicine, Compulsory Health Insurance, or Public Health Centers, in any form.

Seconded and unanimously carried.

DR. OCHSNER: Another purpose of this meeting, a purpose that has been suggested a number of times during the addresses and before the meeting was called was that it would seem feasible that this beginning of a closer cooperation between the dentists, druggists, and doctors, should be perpetuated. I shall be glad to listen to a motion to this effect.

DR. APFELBACH: I move that the representatives of the Committee of the Chicago Medical Society, the Chicago Dental Society and the Chicago Retail Druggists Association take whatever steps are necessary, with the advice of the Chicago Bar Association, if desired, to perpetuate this association of interests between these three professions, and that the Illinois State Nurses Association be invited to cooperate.

The motion was put to a vote and carried unanimously.

THE ETIOLOGY OF PULMONARY TUBERCULOSIS*

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No single phase of pulmonary tuberculosis has been the subject of such prolific discussion and study, as has its etiology. The literature of the 17th and 18th Centuries is especially replete with theories fanciful and varied, some of which in the light of our present knowledge are amusing. Take, for example, that of Beddoes as expressed in a letter written by him in 1793 to Erasmus Darwin. Beddoes, who held the Chair of Chemistry at the University of Oxford, occupied a place of prominence amongst the phthisic-scientists of his day. The title and a brief excerpt of Beddoes' letter are as follows:

"A new Method of Treating Pulmonary Consumption and some Other Diseases hitherto found Incurable." (By Thomas Beddoes, M.D., Bristol. Printed by Bulgin and Rosser.)

If it be true, however, as so many medical practitioners believe, that consumption is now much more frequent, it is easy, according to my system, to understand whence this has happened: the inhabitants of this country almost without exception breathe a freer and purer air than their ancestors. Nor do I believe that there is any particular in which the difference between the present and some past generations is so remarkable. You see, then, that the subjects of our Edwards and our Henrys and of good Queen Bess may have found in being more free from so formidable a disease than our delicate and airy posterity, some compensation for the confined air and filth in which they passed their existence.

A study of Beddoes' writings, which were extensive, portray a pathetic groping for knowledge, directed towards the etiology and treatment of consumption. We find that at the culmination of his many years of crude pioneer research, he arrived at the firm conviction that "Pulmonary Consumption is of a fact due to Hyper-oxygenation." Like Beddoes, there were hundreds of sincere thinking men who after years of original study, floundered about in uncertainty and wild concepts regarding a disease more ravishing than any pestilence or epidemic fever.

Nor has the discovery of the tubercle bacillus entirely put an end to the fanaticism and wild

imageries of the zealous minded. To the followers of tuberculosis, the subject of its causation has always been rife with interest, the explanation lying perhaps in its mysticism and uncertainty. Unlike its morbid anatomy, which is an open book and admits of no conjecture, the predisposing factors offer a rich field for speculation. French, English and American writers have eyed with distrust and voiced their suspicion of almost every known disease, condition and circumstance, in their search for logical factors of predisposition towards tuberculosis. Even at the present writing, authorities, while they have discarded most of the time-disproved theories, are not in perfect accord.

That the tubercle bacillus is the direct cause, is of course indisputable, but from that fact as a starting point, the path deviates and leads to an interminable maze of individual opinion. There is a re-assemblage of forces in the universally accepted theory of childhood infection.

All pulmonary tuberculosis has its inception in infancy and early childhood. This orthodox rule allows but few if any exceptions. We are all aware that tuberculosis in early life manifests itself as an adenitis. We know that the lymphatic glandular system bears the brunt of tuberculosis infection in childhood, in about the same ratio as does the respiratory tract in adult life. The bulk of tuberculosis in childhood is due to direct contact with an open case, the small remaining percentage is due to the ingestion of milk containing the bovine tubercle bacillus. That the bovine tubercle bacillus is responsible for tuberculous adenitis, and even later on for pulmonary tuberculosis, is proven by isolation of a pure culture in both diseases. Individual opinion and statistics differ as to the percentage of bovine infection; all admit its relative infrequency. Those who champion the belief of mutation of types, that is, the gradual metamorphosis of the bovine into the human bacillus, insist on a higher percentage for the former. It is probable, however, that the bovine bacillus is responsible for less than 5 per cent of tuberculosis in infancy and early childhood, and perhaps considerably less than one-half of one per cent in adult pulmonary tuberculosis.

The important major premise—that all pulmonary tuberculosis has its origin in infancy and childhood, and the minor premise—that the human type of bacillus is responsible for the

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bulk of infection, must, in the light of past experiment and present knowledge be accepted.

Tuberculous adenitis, the precursor of adult pulmonary tuberculosis, is the primary infection. And it is a real infection, pulse, temperature and constitutional symptoms and signs attesting to the fact. In most instances, where passive immunization is rapid and complete, the disease is relatively mild. In fact observation of hundreds of cases of glandular tuberculosis in children leads one to wonder whether it is not merely a design on the part of Nature to begin early her process of passive immunization against the more virulent and powerful adversary which in adult life will attack the respiratory tract. If the child during the course of the glandular infection develops ample reserve immunity, then the infection has had a two-fold effect. It has served as the atrium of infection for the pulmonary condition which may develop later in life, but it has at the same time stored up anti-bodies which are subject to call, and will serve as an active, powerful barrier. In advancing this theory, that of beginning passive immunization during childhood infection against pulmonary tuberculosis in adult life, I do so with the realization that it is largely speculative. Phthisio-therapists are agreed that adult pulmonary tuberculosis derives its causative factor from early glandular infection, and it is logical that along with the offending cause, the tubercle bacillus and its toxins, the adult acquires an immunity which is passively increased with the passing years.

Adult pulmonary tuberculosis or the secondary manifestation of the tuberculous infection, is in the nature of a metastatic process. Individual immunity being at a low ebb due to one of many predisposing factors to be discussed later, metastasis, or a spread of the dormant glandular infection to the respiratory tract takes place, and the result is the active pulmonary tuberculosis of adult life. The glands which have successfully harbored inert bacilli and toxins, yield their host and the battle transferred to another field is on again. There are some instances, rare exceptions, in which the direct offending cause, the invading host, is acquired through contact with an open case of pulmonary tuberculosis in adult life, without precedent childhood infection. There are then two essential requisites for a beginning pulmonary tuberculosis, the primary infection of

childhood, plus the fertile soil, the lowered resistance, the predisposition.

In taking up the matter of predisposition and its bearing on the etiology of pulmonary tuberculosis, only the more important elements will be considered, and those briefly.

Heredity. The belief that tuberculosis is transmitted from father or mother, or through a skipped generation, from grandfather or grandmother to grandson or granddaughter, was for a long time popular not alone amongst the laity, but with the profession as well. And this in spite of the fact that the amount of proof to substantiate the claim was negligible. This theory, in the absence of logical proof, owed its birth and existence to the coincidence elicited in many a family history. The father and perhaps the mother and several brothers all had tuberculosis and died therefrom, the patient has tuberculosis, therefore his condition is an hereditary one. False logic to be sure, and yet it was from this coincident history, that the theory derived most of its popularity. Experimental work on animals tended to strengthen the belief. It was demonstrated by a score of reliable men that animals made actively tuberculous by systematic injection of virulent tubercle bacilli, gave birth to tuberculous progeny. Baumgarten in 1891 demonstrated this in chickens. (Baumgarten, Arb. a. Gebiet d. Path. Anst. u. Bact. 1891.) But on summing up and separating the wheat from the chaff, the remaining proof was meager and unsatisfactory.

In line with the theory of heredity and really allied with it, is that of placental transmission. The belief in intra-uterine infection had many advocates, but like heredity, the proof was lacking, and today, congenital tuberculosis is also discredited. The child of a father or mother actively tuberculous at the time of its birth, is handicapped and influenced in two ways. First, because it is deprived of a eugenic start in life. Born of sick and weakly stock, the first powerful asset against tuberculosis is denied it, that of a robust and healthy body. Second, and far more important, the child of an actively tuberculous parent is subjected from its earliest infancy to infection through direct contact. Especially is this so if the affected parent be the mother. With the direct offending cause, the tubercle bacillus in her sputum, she fondles, kisses, and countless times each day paves the way for transmission

of the organism into fertile receptive soil, the entirely unimmunized infant. To resume, heredity *per se*, is not an important predisposing factor towards pulmonary tuberculosis. Direct contact with an actively tuberculous parent, is an all important factor, responsible for a heavy percentage of adult pulmonary tuberculosis.

Diseases of the Respiratory Tract. Any condition or disease which impairs locally and permanently the respiratory tract, especially the lung or pleura, is a predisposing factor towards pulmonary tuberculosis. Thus a simple bronchitis, or repeated bronchites of brief duration and mild degree, predispose only so long as they act as irritants or otherwise interfere with the normal respiratory function. A severe protracted bronchitis which results in an inflammation of the fine terminal bronchioles whose filaments are contiguous with the air vesicles, is a correspondingly greater menace.

Bronchial Asthma. In contra-distinction and refutation of what has just been said, bronchial asthma, oftentimes causing extreme interference with normal respiratory function and at times permanent injury to lung and pleura, predisposes little if any towards pulmonary tuberculosis. The reason is largely speculative, though the atrophic condition of the parenchyma may in a way be responsible, offering as it does an unfriendly soil.

Pleurisy. In discussing the pleurisies as predisposing factors the various types must be considered separately.

Pleurisy Effusio Primatica, a pleurisy with effusion associated with a bronchitis, not preceded by pneumonia, is a definite tubercular infection almost always. There may be an occasional stray primatic pleurisy with the pneumococcus or the pyogenic organisms as the responsible cause. The rule however admits of few exceptions, so that primary pleurisy with effusion is synonymous with tuberculous pleuritis. The focus of infection in such pleurisies may be located in the parietal pleura, however in the vast majority of cases it is of pulmonary origin. An active pulmonary tuberculosis with a lesion superficially located affects the visceral pleura by contiguity.

Pleurisy Plastica, or dry pleurisy, is of tuberculous origin in a heavy percentage of cases, provided it be a true pleurisy. A pain in the chest, cough, etc., are not sufficient to justify such a diagnosis. The typical grating friction rub heard

over the irritated and agglutinated layers of pleura, plus signs of constitutional disturbance, bespeak an inflammation of the pleura which is tuberculous in origin almost always.

Transfusion Pleurisy, often following as the aftermath of a lobar pneumonia, while less frequently of tuberculous origin, is a definite predisposing factor. Not alone does it protract convalescence, and undermine generally an already weakened constitution, but by its prolonged effect of lung impairment and pleural irritation, it paves the way for the active breaking down of the healed tuberculous focus which so many of us harbor. The same holds true for the accumulation of fluid following cardiac or renal insufficiency. Non-tuberculous in origin, they pave the way for re-activation of lung or pleural focus.

Acute Infectious Diseases. The belief that measles presents a strong predisposing factor, has enjoyed an unreasonable degree of popularity. Even today the theory is given a wide credence. I have had occasion to examine and follow up more than five hundred cases of measles, and have elaborated the findings and results in an article recently published. (Ill. Med. Jour., Dec., 1918.) The conclusion arrived at was, that measles deserves no important place amongst the predisposing factors. Just why measles should have been looked upon with such strong suspicion for so long a time, is not clear. A mild and rather inoffensive infectious disease, which runs as a rule a very moderate febrile course, with some slight skin manifestations, and a negligible bronchitis, it really presents no features to justify the importance placed upon it. Of five hundred cases of measles examined and re-examined by myself, only one gave conclusive proof of a re-activation directly attributable to measles infection.

Influenza has never been considered with sufficient seriousness, nor allotted its proper place as a predisposing agent. Statistics gathered on the subject on the occasion of the wide-spread influenza epidemic in 1891, by the health departments of several large representative cities of the United States furnished no proof of any direct association between the two diseases. And yet influenza invariably runs an incomparably more severe course than does measles, and is associated with more extensive and more lasting local irritation. A study made by myself (Amer.

Rev. Tuberc., Aug. 1919) during the epidemic of 1919 on more than thirty cases of quiescent and healed pulmonary tuberculosis, none of which showed prior to influenza infection any signs of activity through a period of long observation, revealed re-activation of thirteen cases directly attributable to influenza, or over forty per cent.

Occupation. Like many of the infectious diseases, so the importance of the various occupations has been generally overestimated. Industrial tables, elaborately prepared, were offered as concrete evidence that this occupation or that was a dangerous and formidable one, one which eventually must lead the unfortunate so employed to a phthisical end. Trades and occupations must be gauged solely from a sociological and sanitary standpoint. A weaver or spinner who is employed in a sanitary workroom, and who after his day's toil is done, goes home to nourishing food and refreshing sleep, may go blithely about his work, and ignore the fact that his occupation is listed as a dangerous one.

In conclusion, it must be born in mind that the most important conditions serving as predisposing factors towards pulmonary tuberculosis are:

1. Contact with an open case of pulmonary tuberculosis in infancy and childhood.
2. Unfavorable sociological surroundings in early childhood as well as in adult life.

These conclusions should lead to the following practical application:

1. An infant of an actively tuberculous parent should be guarded as early and as thoroughly as possible, even if it entails the separation of the infant from the parent, especially is this so if the parent be the mother. A wet-nurse should be substituted whenever feasible.

2. At the age of four or five years, all suspect glandular patients should be carefully examined and checked with x-ray and Von Pirquet. If a positive diagnosis is arrived at, such a child must be treated sanely but vigorously. I have been much impressed with the observation that the treatment of glandular tuberculosis in infants and children is woefully desultory and haphazard. The many hundreds of cases of glandular tuberculosis, so diagnosed by the family physician or by our local dispensaries, are merely diagnosed: the treatment embraces an ineffective tonic, plus advice as to the value of fresh air and sustaining diet. It is my firm conviction that it is as essential to enforce absolute rest on

an actively tuberculous infant or child, as it is in the case of adult pulmonary tuberculosis. The exact mechanism of immunity, like that of fever, is far from being a clear picture. But we do know that rest is the greatest synergist of that process we call passive immunization. When we remember that the one big end in view in the treatment of glandular infection in children is not the subsidence of symptoms, but the attainment to the fullest degree of immunity against the secondary manifestation, the metastatic process of adult life, we are impressed with the importance of absolute rest. Just as the primary infection is immeasurably less severe than the secondary so is the period of rest required commensurately shorter. I believe ten days to two weeks in the average case sufficient.

3. All school children at the age of seven years, or if that is too radical, then at least all suspicious cases should be given a Von Pirquet, and if positive, a thorough course of protective treatment instituted.

4. Children who have had a glandular infection, should be closely watched and followed into adult life. They should be dealt with frankly and warned that pernicious habits such as excessive smoking, excessive venery, venereal disease, etc., may light up the smoldering ember and result in an active pulmonary tuberculosis.

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SYMPTOMS AND DIAGNOSIS OF NASAL ACCESSORY SINUS DISEASE WITH SPECIAL REFERENCE TO THEIR COMPLICATIONS*

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The subject allotted to me by the Program Committee is such a voluminous one, that it will be impossible in the time given me, to do more than to give a brief outline of the essential points in symptomatology and diagnosis.

Nasal accessory sinus disease has, in the last few years, received the recognition by the general profession that it so rightly deserves, owing to the writings and investigations of the men working in this special field. Years ago, little importance was attached to diseases of the sinuses, and little did the profession think that deaths

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were often the result, to say nothing of blindness and untold suffering.

Symptoms and Diagnostic Points Referable to the Nose; Acute Cases. While my paper is especially prepared for chronic sinusitis, nevertheless acute sinusitis can be just as dangerous at times as the chronic cases. The diagnostic symptoms are not numerous and it does not take special skill in diagnosis.

In the first place, there is always a history of a recent rhinitis due to infection which immediately follows some of the eruptive fevers, grippe, colds and occasionally from infections through the circulation or lymph channels, such as typhoid, pneumonia or lues or in many cases of antrum disease, from bad teeth.

Most all acute cases have pain which is of varying intensity, sometimes excruciating, as in acute frontal sinusitis or antrum disease; and the dull ache or full feeling around the eyes, over the bridge of the nose, frontal or occipital headaches as in ethmoidal and sphenoidal disease.

Discharge from Nose in Acute Cases. Sometimes, especially in an early stage of the trouble, the discharge will be of a muco-serous character and scant in amount, while later we have more or less purulent secretion depending upon the amount of swelling and edema of the mucous membrane around the ostia of the sinuses. Fever is frequently present and tenderness over areas involved is often found in these acute cases.

Catarrhal hypertrophies of the turbinates or congestion and inflammation upon true hypertrophic turbinals with a general rhinitis with or without polypi is nearly always found upon examination.

The above symptoms, especially if pus or muco-purulent secretion is found in the middle meatus, are frequently indicative of involvement of the anterior group of sinuses (antrum, ethmoid and frontal) or if muco pus is found in the superior meatus or in the posterior part of the nose, seen by a post-rhinoscopic examination, it usually indicates that the posterior group of sinuses is involved (posterior ethmoidal or sphenoidal). Another aid in diagnosis is a good antero-posterior x-ray picture and a lateral for the sphenoid. Unfortunately, this means of diagnosis is frequently of no value except when a good deal of pus or polypi are present. Frequently we get a shadow which would indicate pus, but upon open-

ing up the sinus, no pus is found. Regardless of errors in x-ray pictures, it is of great value in most instances and even if one cannot absolutely rely upon it, the fact that it gives the size and general outline of the sinuses, makes its use absolutely necessary.

When the pathology extends beyond the area of the sinus or sinuses, the symptoms and signs manifest themselves quite differently than that found in uncomplicated sinusitis and as a consequence there are added dangers, depending upon the locality and severity of the infection.

It is in these cases that the skill of the general man is frequently baffled and unless the trouble is recognized early, the result may be loss of vision, cerebral complications or extensive necrosis, or abscess occurs and frequently death follows. As these complications are more common in the chronic forms of sinus disease, I will not dwell upon them at this time.

In discussing chronic sinusitis, which is often obscure and difficult of diagnosis, it becomes necessary to divide the kind of sinus pathology into two classes, as follows:

Sinus suppuration with or without polypi or polypoid inflammation, generally accompanied by true hypertrophy of the turbinals, especially the middle.

Hyperplastic sinusitis, which most frequently attacks the ethmoids and sphenoids and is due to a slow progressive inflammation with hyperplasia which involves mucous membrane, periosteum and bone, often without any evidence of pus.

It is the latter class which requires expert knowledge in diagnosis and is a frequent cause of optic neuritis and some obscure headaches. The cardinal symptoms of chronic sinusitis are somewhat similar to that of acute sinus disease but are not of such great intensity except in those chronic cases that have a flare-up when they, in reality, become acute.

Headaches. Morning headaches are common, although they may be absent, may occur over frontal or occipital regions; be dull, heavy or severe. The location of them may be of some help if over a particular sinus, but frequently here it may be of little help in diagnosis, unless it be the antrum. A history of morning headache and after a couple of hours, a flow of pus from the nose with mitigation or disappearance of the headache, would naturally suggest suppur-

ative sinusitis. Unfortunately no such history is obtained from the patient, only a rather indescribable headache or neuralgia or perhaps a failing vision, or, as is most frequent, stenosis of the nose plus slight headache and frequent nasal colds followed by nasal discharge.

Once in a great while excoriation or an eczema around the anterior nares gives one a good clew as to sinus disease. By an anterior and posterior rhinoscopic examination and finding pus or muco-pus, edematous middle turbinal, generally with true hypertrophy with polypi or polypoid thickening in the region of the middle or in the superior meatus, the diagnosis of accessory sinus disease is certain. While the above history and pictures are found in the majority of cases, it is the obscure cases where a careful examination is necessary, with the added help of the roentgenologist to make a diagnosis. Frequently no pus is found in the nose even after suction has been employed in the examination, but by a careful examination of the posterior part of the nares by posterior rhinoscopy, pus is seen over the middle turbinals or over the inferior turbinals and often in the post-nasal space.

Every post-nasal discharge, especially with the so-called lateral pharyngitis, would lead one to strongly suspect the posterior ethmoidal or sphenoidal sinus, although the antrum or frontal at times may produce these symptoms.

There are many cases of antrum disease where the pain is a neuralgia, sometimes located over the eye and frequently, if not more often, a dull heavy sensation is felt over the cheek or neuralgia of the upper molar teeth with or without changes in the gums.

In any case where the diagnosis of antrum disease is uncertain, a simple puncture with a trocar under the inferior turbinal and washing it out is all that is necessary to determine whether the antrum is diseased. It is frequently necessary to drive the antrum trocar through by use of a mallet as the bone beneath the inferior turbinal is often quite thick. Finding denuded bone by using a probe between the middle turbinal and outer wall of the nose, with or without polypi, is sufficient to establish the diagnosis of ethmoiditis. The x-ray is of less value in the diagnosis of ethmoid disease than any other sinus, still a good picture here is of value in that it will show the extent and size of these small cells.

The middle turbinal sometimes appears boggy; in other cases it is just hypertrophied or as stated before, polypoid, or it may become cystic, although I am inclined to think that cystic middle turbinals are not pathologic, but frequently become so, owing to their histologic structure. Another point to remember is that the ethmoidal cells occupy a middle position in the group of sinuses and are more frequently diseased.

In mentioning a few points in the diagnosis of frontal sinus disease, one of the most frequent is the tenderness and ache over the inner angle of the orbit and not over the superior orbital notch. The x-ray here gives us valuable aid sometimes, but frequently fails unless the picture is made when pus has not escaped from the sinus. Many frontals are diseased when the x-ray fails to show it, because there is ulceration, but not enough pus accumulates or the naso-frontal duct is patulous, due to atrophy or caries when the disease has existed for sometime.

Sphenoid sinusitis gives the least symptoms as a rule, but as mentioned previously, a post-nasal discharge or pus found in the attic of the nose with deep-seated pain between the eyes or even in the occipital region, would warrant a tentative diagnosis. An x-ray picture here is more essential than of any other sinus, to determine the size and exact location, rather than the finding of pus or polypi.

Of the very large number in my collection of plates, I can recall very few where disease of the sphenoid was shown by the x-ray except sometimes in the so-called hyperplastic cases, which are not nearly so frequent as the suppurative type. My rule is, that where I find pus in the middle or superior meatus and where there are no symptoms, nor x-ray findings of frontal disease, to open all of the sinuses on that side (except the frontal) and often it becomes necessary to remove from one-third to three-fourths of the middle turbinal. Since doing this the past six or eight years, I seldom have to operate a second time. Of course the opening is made large enough to be permanent and the ethmoids completely eradicated.

Hyperplastic ethmoiditis and sphenoiditis, as stated, is not as common as the other type, but it is this type which is sometimes fraught with great danger to the sight, and those frequent

headaches involving the frontal and occipital or pain in the facial region.

This form of nasal sinus disease is rather obscure as to its pathology and symptomatology. To my way of thinking, it is surely the result of sinus infection, practically always the result of a purulent inflammation. The great majority of these hyperplastic cases show little if any pus, in the late stage, although the infection still exists and is of a slow progressive type attacking mucosa, periosteum and bone.

Wright of New York has shown that bone absorption and hyperplasia go on at the same time. In many cases that I have seen the condition reminds me of an old volcanic crater whose sides are filled up with lava and where the eruptions have ceased, although the volcano is still active.

Unfortunately, eruption can occur at any time and set up violent inflammation. It is in these cases that I mentioned previously, that we find obscure headaches and eye disease especially; many cases of blindness from involving the optic nerves, also facial pain from the involvement of branches of the maxillary nerves. Upon examining the nose in these cases, you will find a variable picture. The most constant nasal sign on anterior and posterior rhinoscopy is an enlarged edematous or granular middle turbinal with a thickening of the bone itself, with small polypi as a rule, and perhaps a small amount of thin mucoid secretion. In a few cases, you will find considerable pus with large polypi with or without a large turbinal. I have seen cases where the middle turbinal (exceptional) seemed atrophied and where the ethmoidal labyrinth had taken on so much hyperplasia that it had almost blocked the middle meatus. When you find the above condition of the ethmoids, it invariably is the rule to find the sphenoidal hyperplasia, but my personal opinion is that we do not find such great bone changes in sphenoidal hyperplasia as we do in the ethmoids.

Another sign that has been brought out recently is the thickening of the upper part of the septum near the sphenoidal sinus. Men like Wright, Sluder and Onodi claim that the hyperplasia in these cases of ethmoiditis and sphenoiditis is always bilateral, but from my personal observation, I can state that it is usually more in evidence on one side than on another. It is astonishing that we do not have more nerve

involvement than we do, when one considers the relationship between the first, third, fourth and sixth and some branches of the fifth. A few cases of hyperplastic ethmoiditis and sphenoiditis are only found after the most careful examination, as there is no evidence of muco-pus or polypi.

It is in these rare cases one is apt to overlook them as a cause for optic neuritis and the rule now is, when in doubt and such a condition exists and no other apparent cause can be found for it, to do an operation on the ethmoids and sphenoids and have a Wassermann made, as I think many of the above cases are luetic.

The Complications from Nasal Accessory Sinus Disease. The orbit being in close relationship to all the sinuses and the fact that dihsences are frequent, is more subject to disease. Among the complications, you will find displacement of the eye causing squint, exophthalmos, cellulitis, orbital caries, orbital abscess, fistula, optic neuritis or atrophy and sometimes panophthalmitis, to say nothing of minor conditions like conjunctival troubles. Involvement of the frontal bones usually come from frontal sinus cases, caries, fistulous tract, osteomyelitis, abscess of the cellular tissues of the forehead, caries of the posterior wall of frontal sinus, epidural abscess, and frontal lobe abscess. In the sphenoid, we sometimes have cavernous sinus, thrombosis, hemorrhage from the cavernous sinus (this is extremely rare) and it has occurred in one of my cases with erosion of the wall producing a cerebellar abscess.

Antrum complications are usually not so severe, but produce occasional orbital abscess or cellulitis, squint, errors of refraction, exophthalmos and fistulous disease of the gums. But as I stated before, diseases of the teeth are usually responsible for a great number of diseases of the antrum. Pharyngitis is common, so-called catarrhal pharyngitis and a mild grade of atrophic pharyngitis. This is usually the result of sphenoid sinus trouble.

Larynx. Chronic laryngitis, laryngitis sicca and in some very bad and chronic cases, atrophic laryngitis. This also is a result of sphenoid and ethmoid disease.

Gastro and Intestinal Complications. Indigestion, gastritis and constipation are frequently found.

Nervous Symptoms. Neurasthenia, hysteric attacks, occasional melancholia and meningitis.

PRESENT TENDENCIES IN FEDERAL
PUBLIC HEALTH LEGISLATION*

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Efforts on the part of the medical profession for the reorganization of federal public health work and for increased federal activity along public health lines have been going on for half a century. At no time during this period have the ultimate desires and plans of the advocates of such legislation been realized. The laws that have been adopted have been compromises and half-way measures. Each session of Congress has seen the introduction of an increasing number of measures intended to reorganize the public health work of the national government. The increasing interest in this field is shown by the fact that the present session of Congress has had more bills on public health and related subjects introduced than any previous session. In the numerous measures now before Congress can be found representatives of almost every class of legislation that has heretofore been suggested. A review of the present legislative situation, therefore, will constitute a fairly comprehensive study of the entire problem.

The most conspicuous single subject in this field is naturally that of a national department of health. The first mention of this question appears in the proceedings of the American Medical Association in 1871, when Dr. George Houston, Secretary of the California State Medical Society, presented a preamble and resolutions calling attention to the growing importance of preventive medicine and to the recent establishment of state boards of health in Massachusetts and California, at that time the only states which had created such boards. The resolution recommended that the American Medical Association take steps, as soon as six states should establish state departments of health, to bring about the formation of a national health council for the study of vital statistics and the diffusion of sanitary knowledge. The resolutions were adopted and a committee consisting of one member from each state was appointed to promote the organization of state boards of health. There is nothing in the record to show that this

committee ever adopted any definite, constructive program, although it was continued through several years.

In 1872 the first bill on this subject, prepared by Dr. C. C. Cox, was introduced into Congress. It provided for the establishment of a national bureau of sanitary science to be located in Washington "to effect a union of views as to a method of action so as to bring every state into immediate communication, by means of state boards of health, with the central office in Washington, to be presided over by a commissioner or secretary of public health." Dr. Thomas M. Logan of California, President of the Association at that time, discussed the bill in his presidential address and urged the Association to take up active methods for the education of the public. His views on this subject were far in advance of his time. He said, "Let us throw away all puerile notions about the dignity of our calling and approach the public through the only channels by which they can be reached—the newspaper and the lecture room. This is our work for the future to educate the people."

In 1873, following a severe epidemic of yellow fever in the South, a second bill was introduced providing for national quarantine service. In 1875, Doctor Bowditch drafted a plan for national health organization which attracted wide discussion. In 1878, the great yellow fever epidemic in the South brought about the organization in both houses of Congress of special committees on epidemic diseases. A commission financed by Mrs. Elizabeth Thompson was appointed to investigate the cause of yellow fever. In December of 1878, Senator Lamar of Mississippi introduced a bill creating a department of public health with a director-general in charge. In 1879 the congressional yellow fever commission presented its report recommending national quarantine and a central health authority in Washington. Senator Harris of Tennessee, Chairman of the Senate Committee on Epidemics, introduced a bill creating a bureau of public health with a director-general and a board of seven members. This bill passed the Senate but was defeated in the House. In the meantime Mr. McGowan of Michigan introduced a bill which passed both houses in the closing hours of the session of the Forty-fifth Congress and became a law on March 3, 1879. It created a national board of health of seven members appointed by

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the President, one medical officer from the Army, the Navy and the Marine Hospital Service and one officer from the Department of Justice. Its duties were to obtain information on health topics and to advise the various governmental departments; also to report to Congress a plan for a national health organization. The board was organized April 2, 1879, and continued in existence for four years. The methods, proceedings and reports of this board, the only national board of health ever created in this country, are most interesting reading. Unfortunately the time and interest of the board were largely occupied in trivial questions. There is no record of any recommendations ever having been made to Congress for the organization of a permanent department of health by this board. It also became involved in politics and in departmental intrigue in Washington and early aroused the antagonism of Dr. John B. Hamilton, who had just been appointed Surgeon General of the United States Marine Hospital Service. The newly created board attempted to take over the Quarantine Service which had just been established as one of the functions of the Marine Hospital Service. Doctor Hamilton resisted this and opposed the board at every opportunity. He was not able to get the law repealed but was able through political influence to prevent the appropriation of any money for the board after 1881 so that by 1883 the board went out of existence.

In 1886 Dr. Robert T. Davis, Member of the House from Massachusetts, introduced a bill providing for a bureau of public health in the Department of the Interior under a commissioner. The same year Dr. John H. Rauch, Secretary of the Illinois State Board of Health, stated in his address as Chairman of the Section on State Medicine that three different bills on this subject were then pending in Congress.

In 1891 a bill was introduced providing for a department of health to be made up of the Marine Hospital Service, the Bureau of Education, the Division of Vital Statistics, Animal Diseases and the Weather Bureau. In 1892 Senator Sherman of Ohio presented what was known for several years as the Sherman bill providing for a health bureau in the Treasury Department, and Mr. Caldwell introduced a bill in the House providing for a department and a medical secretary of public health.

In 1896 the American Medical Association appointed a Committee on a National Department of Health, of which Dr. Jerome Cochran of Alabama was Chairman. Doctor Cochran advocated the development of the Marine Hospital Service into a national public health service.

In 1897 Senator Spooner of Wisconsin introduced a lengthy bill providing for a national department of health with a commissioner and an advisory council composed of the secretary of each state board of health. Consideration of this measure was interrupted by the Spanish-American War.

No further attention was given to this matter until 1910 when Senator Owen of Oklahoma introduced Senate Bill 6049, the original Owen bill, providing for a department of health with a secretary in the Cabinet and for the assembling in this department of all divisions and bureaus carrying on any work for the protection of human or animal life. The second Owen bill (Senate Bill 1) was introduced by Senator Owen in 1911. After remaining in the Senate Committee on Public Health for nearly a year, it was reported out with amendments which practically made it a new bill. The measure now provided for an independent United States Public Health Service with a director at the head and with detailed provisions regarding bureaus, personnel and activities.

In 1913 Senator Owen introduced the third Owen bill. In 1915, Senator Smoot of Utah introduced Senate Bill 65, providing for an Assistant Secretary in the Treasury Department to be known as the Assistant Secretary for Public Health, and for the transfer to the United States Public Health Service of the Division of Vital Statistics of the Bureau of the Census and the creation of divisions of sanitary engineering and child hygiene.

This completes the summary of the most important bills on this subject up to the opening of the present session of Congress. During the fifty years which have elapsed since the first bill was introduced some thirty measures on this question have been presented providing for almost every possible form of national health organization. In the meantime, as you know, the movement for state boards of health begun in Massachusetts in 1869 had continued until every state has now created some form of legally constituted health machinery for the protection of

its people and most of the cities of any size have also organized municipal health departments.

In spite of the immense amount of energy that has been expended by the medical profession during the last half century in framing and endeavoring to secure the passage of laws on this subject, no accepted agreement has as yet been reached as to the best and most desirable kind of federal health organization. Almost every conceivable plan has been proposed in some of these bills. A department of health as a part of the executive government with a secretary in the Cabinet, a bureau of health under one of the existing executive departments with a chief or assistant secretary in charge, an independent board or commission under a single commissioner or a commission of three, five or seven persons, a joint department on health and education and the conversion of one of the existing executive departments such as the Department of the Interior into a Department of Public Health, a Department of Public Health and Education or a Department of Public Welfare, have all been proposed and urged at different times. Each of these plans has had the endorsement of prominent and influential laymen and of distinguished sanitarians and members of the medical profession. Plans widely differing have been endorsed by groups of equal ability. No agreement as to the principles on which national public health reorganization should be based has ever been secured.

Today the United States Public Health Service, a Bureau of the Treasury Department, is the real health organization of the national government. In the Department of Labor, the Children's Bureau carries on certain public health work as a part of its child welfare activities. In the Department of Agriculture, the Bureau of Chemistry is charged with the enforcement of the Federal Food and Drugs Act which has many public health aspects. The Commissioner of Internal Revenue in the Treasury Department is charged with the enforcement of the Harrison law regulating the use of narcotic drugs and with the enforcement of the national prohibition law regulating the use of alcohol. In the Department of the Interior, the Bureau of Education advises state, county and local school officers as to the administration and improvement of schools which naturally includes many important health problems. The Commissioner of

Indian Affairs has charge of the general welfare of Indians. The Division of Vital Statistics of the Bureau of the Census in the Department of Commerce collects, tabulates and publishes statistics regarding births and deaths. In addition, various other bureaus and divisions scattered throughout the executive department of the government are carrying on work which has a definite relation to public health. So that the health activities of the federal government are today scattered among many different departments, bureaus and divisions, all of which are working independently and without co-ordination. A realization of this situation is necessary in order to understand the motives lying behind pending legislation and the arguments that are being advanced in support of some of the bills now before Congress.

The present session may be regarded as typical of the sessions of Congress for the last ten years. The following are the most important public health measures which have been introduced during the present session of Congress:

Senate Bill 233, introduced by Mr. Robinson, provides for a system of state aid in maternity and infancy under the direction of the Children's Bureau in the Department of Labor, for the organization of a Board of Maternity Aid and Infant Hygiene in each state, and for the appropriation of \$11,888,000.

Senate Bill 814, introduced by Mr. Owen, provides for an Executive Department to be known as a Department of Health with a secretary of health as a member of the President's Cabinet and with a blank appropriation to meet the expenses of the new department.

Senate Bill 1017, introduced by Mr. Smith, provides for an Executive Department to be known as the Department of Education with a secretary in the Cabinet, for the appropriation of over \$100,000,000, and for the supervision by this proposed department of physical education and instructions in the principles of health and sanitation, for school nurses, school dental clinics and the promotion of physical and mental welfare, and for physical education including health education, recreation and sanitation as one of the duties of the proposed department.

Senate Bill 2507, introduced by Mr. France, provides for a Department of Public Health with a secretary in the Cabinet, for the transfer to this department of the United States Public Health Service from the Department of the Treasury and the Bureau of Chemistry from the Department of Agriculture; for the establishment of a system of joint state and federal hospitals, and for the appropriation of \$63,000,000.

Senate Bill 2359, introduced by Mr. Sheppard, provides for a Federal Board of Maternal and Infant Hygiene, for the creation in each state of a state

board of maternal and infant hygiene and for the appropriation of \$20,880,000.

H. R. 5724, introduced by Mr. McDuffie, provides for a Department of Public Health with a secretary in the Cabinet, and for the appropriation of \$10,000,000 annually.

H. R. 10510, introduced by Mr. Mann, provides for the appropriation of \$2,500,000, to be prorated among the different states for the development of local health work.

H. R. 10925, introduced by Mr. Towner, provides for the appropriation of \$16,480,000 for maternity welfare and infant hygiene.

H. R. 12652, introduced by Mr. Fess, provides for the appropriation of \$10,500,000 for the promotion of physical education.

The aggregate appropriations made by these measures amount to over \$235,740,000.

Senate Concurrent Resolution No. 14 and House Concurrent Resolution No. 33 are the result of the combined efforts of the American Medical Association, the State Health Officers and the American Public Health Association. They also, for the first time, offer a definite, constructive program for these organizations to follow. The story of this resolution is worth telling. At the Atlantic City session of the American Medical Association in 1919, the Council on Health and Public Instruction and the Executive Committee of the State Health Officers agreed to co-operate in endeavoring to secure a reorganization of federal public health agencies. A joint committee, consisting of the Chairman, the Secretary and Dr. W. S. Rankin from the Council, and Dr. S. J. Crumbine, Secretary of the State Board of Health of Kansas, Dr. C. St. Clair Drake, Director of Public Health in Illinois, and Dr. Allen W. Freeman, Commissioner of Health in Ohio, representing the Association of State Health Officers, was appointed to co-ordinate the work of the two bodies. After considerable correspondence, a conference was held at the Association headquarters in Chicago, July 28-30, 1919, at which were present the members of the Joint Committee, other members of the Executive Committee of the Association of State Health Officers and advisers on legal and technical questions. After three days spent in discussing the details of the proposed reorganization and the essential provisions of a bill for this purpose, it was recognized that it was not possible to draft a satisfactory bill for the reorganization of the federal public health work until more information was available regarding the present public health

activities of the federal government, what work was being done in the different departments, what appropriations were being made, how much was being spent, what was being accomplished, etc. It was realized that it would be impossible to draft a workable bill without authoritative and official information on these points. The possibility of the Council undertaking a survey of federal public health work was then discussed. Following the adjournment of the conference, this discussion was carried on by correspondence. Continued discussion of it led to the realization of the fact that any such survey carried on by private or unofficial agencies would neither be constructive nor authoritative and that such a study could be made only by a commission created by act of Congress, authorized and empowered to summon before it the heads of the various bureaus and departments of the federal government, to call for official reports, estimates, records of expenditures, etc., and to carry on a systematic official survey of the entire health work being done by the federal government, what reorganization and rearrangement was possible and advisable and how this could best be brought about. The Secretary and Dr. C. St. Clair Drake were appointed a subcommittee to prepare a measure for accomplishing this purpose. Careful study of the situation in Washington together with an inquiry into the legal and parliamentary questions involved, showed that the best form of securing the end sought was by means of a joint concurrent resolution. Such a resolution was accordingly drafted and introduced into the Senate by Hon. Joseph E. France of Maryland, as Senate Joint Concurrent Resolution 14, and into the House by Hon. E. E. Denison of Illinois as House Joint Concurrent Resolution 33. The resolution provides for a joint committee to consist of three members of the Senate and three members of the House to "to make a survey of and report on those activities of the several departments, divisions, bureaus, offices and agencies of the Government of the United States which relate to the protection and promotion of the public health, sanitation, care of the sick and injured and the collection and dissemination of information relating thereto." The committee is directed to report to Congress:

1. The statutory powers and duties conferred by the Congress on any department, division,

bureau, office or agency of the United States Government to carry on any work pertaining to the conservation and improvement of the public health, together with any rules and regulations authorized or promulgated thereunder;

2. The organization now existing in the Federal Government for the purpose of carrying out these powers and duties, together with the personnel of, appropriations for, and expenditures by each department, division, bureau, office and agency during the fiscal year ended June 30, 1919;

3. The co-ordination now existing between said departments, divisions, bureaus, offices and agencies, together with any conflict, overlapping, or duplication of powers, duties, functions, organization, and activities;

4. The co-operation and co-ordination now existing between the Government of the United States and the government of the several States or extragovernmental agencies for the conservation or improvement of the public health;

5. Such further information as such committee may deem proper;

6. Such recommendations as such committee may deem advisable to offer for the improvement of the public health work of the United States Government.

This resolution, which is short and easily understood, provides for the first time for a systematic study of the public health activities of the federal government as a basis for reorganization. The resolution passed the Senate December 20. It is still in the Committee on Rules in the House.

At the New Orleans session of the American Public Health Association in October, 1919, one afternoon session was devoted to the discussion of this question, following which the American Public Health Association adopted a resolution unanimously endorsing the action of the joint committee, urging the passage of the resolution by Congress and authorizing the appointment of a committee to represent the American Public Health Association and to co-operate with the joint committee in securing the passage of this resolution. The committee appointed by the President of the American Public Health Association consisted of Dr. Haven Emerson, New York City, Dr. Charles V. Chapin, Providence, Rhode Island, and Mr. Lee K. Frankel of New York.

The formulation of this resolution providing for a congressional survey of federal public health work and the submission of recommendations for the reorganization, co-ordination and improvement of federal public health activities, constitutes for the first time in the history of this movement a definite, sound and practical program. In the furtherance of this program, that Council has enlisted the co-operation of the American Public Health Association and the Association of State Health Officers. The joint committee which has been created forms an effective means whereby the combined influence of the three organizations represented can be utilized for constructive public health work. For the first time in the history of this movement we are on the right track. It is hoped that the concurrent resolution may pass the House during the present session and the committee may be appointed to carry on its survey during the summer recess of Congress so as to report early in December. If this is not possible, then there are gratifying prospects of the passage of this resolution as soon as the new Congress convenes under a new administration.

In addition to bills providing for reorganization of the health machinery, a number of other measures have been introduced bearing more or less directly on public health questions and of interest to physicians. On June 2, 1919, Senator Myers of Montana introduced Senate Bill 1258 which reads as follows:

A BILL

To prohibit experiments upon living dogs in the District of Columbia or in any of the Territorial or insular possessions of the United States, and providing a penalty for violation thereof.

WHEREAS, the dog has made a wonderful war record, and from everywhere word comes of his courage, his faithfulness, his cheery comradeship, and his keen intelligence; and

WHEREAS, he has been decorated for bravery, serving his country, following its flag, and dying for its cause: Now, as an act of right and justice to the dog and as a tribute to the soldiers who speak and plead for him:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That from and after the passage of this act it shall be a misdemeanor for any person to experiment or operate in any manner whatsoever upon any living dog, for any purpose other than the healing or curing of said dog of physical ailments, in

the District of Columbia or in any of the Territorial or insular possessions of the United States.

Sec. 2. That any person convicted of a violation of this act shall be sentenced to pay a fine of not less than \$100 nor more than \$500, or to undergo imprisonment for a term of not less than three months nor more than one year, or both such fine and imprisonment.

Sec. 3. That all acts or parts of acts inconsistent herewith are hereby repealed.

While this bill ostensibly relates only to experiments on dogs in the District of Columbia, it is in reality an adroit effort to take advantage of the popular fondness for dogs to introduce an opening wedge that could later on be used to secure complete prohibition of all animal experimentation throughout the country. Arrangements were accordingly made to present the side of scientific medicine in opposition to this measure. The bill was referred to a subcommittee consisting of Senator Norris of Nebraska, Senator Colt of Rhode Island and Senator Ashurst of Arizona. The hearing was held on the bill the first of November at which the antivivisectionists were present in force. They were given unlimited opportunity to present their arguments and discussed the question from an antivivisection standpoint. Then twenty of the leading scientific authorities in the field of research and disease prevention presented the scientific side of the case. This list included such men as Dr. William H. Welch of Johns Hopkins, Dr. Walter B. Cannon of Harvard University, Dr. Simon Flexner of Rockefeller Institute, Dr. Carl Alsberg of the Bureau of Chemistry, Col. F. F. Russell of the United States Army, Dr. C. W. Stiles, Dr. S. W. McCoy, Dr. Joseph Goldberger and Dr. J. W. Schereschewsky of the United States Public Health Service and others. The testimony was an overwhelming presentation of the value of unrestricted animal experimentation and of the inadvisability of any restrictive laws on this subject. The bill is still in the hands of the committee and there is no likelihood of its being reported out. At the recent meeting of the American Medical Association, the House of Delegates instructed the Council on Health and Public Instruction to publish the hearing before the Senate Committee for distribution.

Another bill bearing on public health is an amendment submitted by Senator France to House Bill 11984 which provides for the taking of the census.

This amendment proposes that the Bureau of the

Census shall make and maintain by duplicate card index systems a record of the inhabitants of the United States showing "specifically and in detail for each and every inhabitant the place and date of birth; acute and chronic contagious diseases; occupational diseases and accidents; school attendance and progress; business or vocational training; military training or service and wounds or disability contracted in the service; high school, college or technical training; health and physical condition of all school children under fourteen years of age and of all males under forty-five years of age as estimated by an annual medical examination; place, character, sanitation and tenure of abode; relationship to head of the family; color; sex; age; conjugal condition; occupation; condition of employment or unemployment; registration in Federal employment agency; whether employer or employee; trade; business; public offices, honors or special achievements; payment of taxation or insurance premiums; whether qualified and habitually exercising suffrage rights in State and Federal elections; place of birth of parents, nationality and mother tongue and knowledge of English if born in a foreign country; nationality, mother tongue and knowledge of English of parents of foreign birth, and number of years in the United States; literacy; and the date, place and cause of death. It also provides for surveys of public or private health bureaus or agencies, public or private hospitals or sanatoria, contagious and industrial diseases, industrial accidents, etc.

The amount of data called for in this amendment and the enormous amount of work involved in its collection and tabulation renders it highly improbable that this bill will ever be adopted.

On January 7, 1920, Senator Harris of Georgia introduced Senate Joint Resolution 141 providing for the appropriation of \$500,000 to enable the United States Public Health Service to co-operate with the state boards of health in the investigation of the control of malaria. This amount was afterward reduced to \$300,000.

Two other bills bearing on the regulation of the practice of medicine have been introduced. Senator Kellogg of Minnesota on February 24, 1920, introduced Senate Bill 3959 incorporating the national board of medical examiners and Mr. Mason of Illinois on August 6, 1919, introduced H. R. 8313 providing that any person over twenty-one years of age who has completed the course of study in the high school or equivalent and two years of premedical education and four years of study in a professional school authorized to grant the degree of Doctor of Medicine and who has been licensed in any state in the Union may file with the Secretary of the Interior at

Washington a state license whereupon the Secretary of the Interior shall issue to such persons a license to practice medicine in all the states in the United States.

A number of other measures have been introduced making appropriations for or conferring additional public health powers on some of the Departments of the executive government, but the bills enumerated above include all of the most important ones. Several general comments on the obvious trend of national health legislation are evident.

1. There is a marked tendency in the public health field as in all other lines to attempt by special legislation to increase the power of the federal government at the expense of the state governments and to empower some part of the federal executive government to assume responsibilities or perform functions which have hitherto been regarded as exclusively state responsibilities. Probably the most conspicuous example of this is the bill introduced by Mr. Mason giving the Secretary of the Interior the power to license anyone holding a license to practice medicine in any one state to practice medicine in all states. As the regulation of the practice of medicine like that of all other occupations, professions, and trades comes under the police power of the state, which police power has always been jealously retained by the several states and never surrendered to the federal government and as the Constitution specifically provides that all powers not surrendered by the states shall be retained by them, the courts of last resort from the United States Supreme Court down, have repeatedly held that the regulation of the practice of medicine is a function of the state and not of the federal government. There is no probability of Mr. Mason's bill ever becoming a law. If it ever did, it would be thrown out as unconstitutional as soon as it could be gotten up to the United States Supreme Court. I am informed that the African gentleman in the woodpile in this particular instance is the proviso found at the end of the first section of the bill "that any medical school not affiliated with the university may establish and maintain an auxiliary premedical department to cover the two years' college studies." I am told that the object of this bill is to legalize a medical college which has not been able to secure recognition from the authorities of the state in which it is located and which is endeavoring by this

device to secure for its graduates the right to practice in any state regardless of the rulings of the state authorities. Whether this is true or not, I do not know, but it seems very strange that anyone with even a rudimentary knowledge of the United States Constitution would seriously propose such a measure.

Senator Kellogg's bill incorporating the National Board of Medical Examiners provides in Section 3 that persons qualified and admitted to practice medicine in foreign jurisdictions and holding certificates acceptable to the National Board of Medical Examiners shall be admitted to practice medicine in any state or territory without further examination by the licensing boards thereof. This provision is also unconstitutional. It does not matter whether the applicant is a foreigner or a citizen, the only authority that can establish regulations limiting the right to practice medicine is the state, and the federal government has no power to impose standards on the state in any mandatory form.

2. Practically all of the bills providing for organization of a department of health or education are drafted on what is known as the state aid plan, providing for the appropriation by Congress of a certain amount of money to be distributed pro rata to the different states either in accordance with their population, the number of school children or the amount of money appropriated by the state for a similar purpose. This method was adopted during the war and the years immediately preceding the war in order to get immediate and uniform action from the various states and to stimulate state activities in various lines. An illustration of this principle is the emergency law providing for the control and suppression of venereal diseases through the joint activities of the medical departments of the Army and Navy, the United States Public Health Service and the various state health departments. Here it was necessary on account of the location of thirty-two large concentration and training camps and of many smaller cantonments and military centers to get immediate action in order to control effectively the spread of venereal diseases. Congress accordingly appropriated a large sum of money to be pro rated among the different states, dollar for dollar, as they made similar appropriations for the same purpose, the joint amount to be spent under the direction of the state health

authorities and the federal government authorities.

The same principle was followed by the Rockefeller Foundation in inaugurating its hookworm work in the South. The immediate success of this method has led the proponents of all kinds of health and efficiency plans to incorporate this provision in their bills with the result that the bills providing for health reorganization, sanitation and hygiene in the schools, physical training of school children, etc., all of them contain some such measure. While it must be admitted that this method saves time and so is invaluable in an emergency, it is not a sound principle on which to base permanent health legislation. Its advocates apparently forget that the federal government itself does not and cannot produce one cent of money. All of the money which the federal government has to spend must be raised by taxation, either direct or indirect. Money raised by the sale of bonds, of course, must later on be repaid through money obtained through taxation. The state aid principle is unjust in that the state which gets the most pays the least and vice versa. If it is for health purposes, then the older and more wealthy and prosperous states which already have highly organized and satisfactory health machinery of their own such as New York, Pennsylvania, Illinois and others, are compelled to pay more than their share to develop public health machinery in those states which have not been able to secure it for themselves. The principle is also vicious in that it relieves the people of each state of the responsibility of working out their own salvation and paying for their own health improvement and further leads to the popular belief far too prevalent that the federal government is an inexhaustible source of revenue and that any scheme no matter how remote or fantastic can be financed out of the federal treasury. Undoubtedly it is a much slower process to educate the people of each state to the need of some improvement and to secure their endorsement of it but the results in the end will be far more satisfactory than if it is secured for them by the federal government without cost on their part.

Regarding the outcome of present pending bills, it seems highly probable that, as is the case in all legislatures, fully nine-tenths of the proposed measures will go into the waste basket. This is especially true at the present time when the two

parties are preparing for a presidential campaign and are consequently sparring for position. The Republican party in its appeal to the people during the coming campaign intends to attack the war record of the Democratic party, especially as far as expenditure of money is concerned and to point to their own record during the present session of Congress as one of economy and retrenchment. The position of the Republican leaders and especially that of Mr. Mondell of Wyoming, the floor leader of the Republican party in the House, and the dominant personality in the Republican Steering Committee, is against all increased appropriation for old purposes and against any appropriation for new purposes. It is also entirely inconceivable that in the closing months of the Democratic administration the Republican majority in both houses is going to create a new cabinet officer for President Wilson to appoint. The chances, therefore, of either a department of health or a department of education are at present practically negligible.

With a change of administration, however, the possibilities are much better. Regardless of whether the next president is a Republican or a Democrat, the next four years will probably witness a reorganization of the executive department of the federal government, a readjustment of functions and especially of the relative importance of different activities. Public health in all of its relations has come to occupy so important a position in the last twenty-five or thirty years that it is difficult to see how any readjustment can take place without increasing the powers, functions, appropriations and personnel of the federal health work. Whether the much needed consolidation and reorganization can best be brought about through the gradual upbuilding of the United States Public Health Service or through the creation *de novo* of a national department of health is one of the problems that has engaged the attention of those interested for fifty years past. We are apparently no nearer solution than we were then. If the concurrent resolution referred to above and drafted by the Joint Committee of the American Medical Association, the American Public Health Association and the Association of State Health Officers can be enacted into law and an authoritative body appointed to survey this entire field to secure reliable and authoritative data

thereon and to report its recommendations to both Houses, it will, to a large extent, take this question out of the field of partisan controversy which has for so long stood in the way of progress. If the creation of such a commission cannot be secured during the present session, then it ought by all means to be presented at the earliest opportunity. This plan constitutes for the first time in the history of the American Medical Association a sound, logical and constructive program which should be adhered to until its purposes are secured.

Closely related to the creation of a joint commission to make a survey of public health activities is the need of creating a committee on public health in the House. All legislation relating to public health is referred in the House to the House Committee on Interstate and Foreign Commerce, the inference being that the sole interest of Congress in public health questions lies in their relation to interstate commerce. This committee is always and has been for the last five years especially absorbed in railroad and interstate problems and has consequently regarded its health functions as of little, if any, consequence. More important still, however, is the fact that there is no one man or group of men in the House who are preeminently interested in promoting public health legislation and the entire question of national health legislation is, therefore, the greater part of the time without a sponsor or a leader in the House of Representatives. Until such a committee is created, it is quite useless to expect the members of Congress to neglect other important matters referred to the committee of which they are members and to devote themselves to the consideration of public health subjects. The creation of a House Committee on Public Health, the appointment thereon of those members of the House who are especially interested in the subject and the development in the House of three or four members on each side whose primary interest as members of Congress lies in public health legislation, is the only way in which such legislation is going to be given the consideration in the House to which it is entitled.

The trouble with our efforts at constructive federal health legislation in the past has been that we wanted to put up the building and put up the roof before we had laid the foundations. From the standpoint of practical legislation, our

efforts have consequently been very largely a waste of time. The two essential things as necessarily preliminary to the securing of such federal health organization as we all desire, are, first, the creation of a committee on public health in the House, and second, the establishment of a joint congressional committee authorized to make a survey of all the federal public health work now being done and to report its findings to Congress with recommendation for suitable and effective reorganization.

[Note: This article was written in May 1920. The 66th Congress adjourned March 4, 1921, without having passed any of the bills discussed. As most of these bills will be reintroduced at the next session of Congress, however, the comments made regarding present legislative tendencies are still applicable.]

NON-SURGICAL DRAINAGE OF THE BILIARY TRACT. ITS USEFULNESS AS A DIAGNOSTIC AND THERAPEUTIC AGENT*

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Foreword.—In this brief, preliminary report, with my associates, Dr. Clyde F. Karshner and Dr. Richard B. Oleson, I shall describe our experience with a new clinical and laboratory procedure for diagnosis and therapy of affections of the bile passages. This method enables one to secure specimens of bile from the several segments of the gall tract (from duodenum to hepatic duct radicles) by direct, non-surgical drainage and, if properly carried out and controlled, supplies reliable clinical information not only with regard to the *nature* of the biliary malfunction but also gives indications of practical worth respecting *just what divisions* of the gall tract are diseased. In what may be termed a corollary to this new method of clinical investigation, I shall outline a procedure for the treatment of certain forms of gall-bladder and bile-duct affections by non-operative drainage coupled with an appropriate regimen. A short summary of some phases leading up to the development of the method is here indicated.

PART I

In a study of duodenal residues directly se-

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cured by means of his tube, some five years ago, Max Einhorn recorded that bile admixtures not infrequently interfered with accurate chemical analyses of the contents of the duodenum. The duodenal aspirates, either intermittently or constantly, held bile. This interference by bile greatly vitiated chemical estimations of duodenal juice acidity. Such resulted not only because the inconstancy of bile admixtures introduced a variable factor into fractional test-meal investigations, but also because, not rarely, the bile admixed was abnormal in kind: it was abnormal in quantity as well as physically, chemically, cytologically and bacteriologically. After further observing the alterations in the physical properties of these bile residues and endeavoring to correlate these variations with clinical and physical findings, Einhorn ventured the suggestion that by such study of duodenal contents, particularly with respect to their "contamination" with bile, it was possible to hazard opinion with regard to the nature and extent of gall-tract disease. Shortly afterwards, Rehfuess and his associates made a similar suggestion but, with Einhorn, were fully alive to the wide range of error possible in such diagnostic methods. Bile, as thus obtained in duodenal contents, was mixed with gastric, duodenal and pancreatic juices, was commonly befouled with the bacterial flora of the upper alimentary tract and, what was most important, the bile secured from duodenal residues in so haphazard a fashion was doubtless not representative of bile held by the gall-bladder or the gall ducts or of that bile freshly excreted from the liver in any given subject. Thus far, the only method of studying the bile content of the various segments of the gall-tract was by experimental surgery or at operation when bile could be directly obtained from gall-bladder or ducts. Obviously, such procedure could have little place in the practical clinical diagnosis of patients ill, or supposed to be, from ailments of the liver or gall-tract. If chemical or microscopic studies of bile were to be depended upon to furnish diagnostic information previous to laparotomy, it was evident that a procedure must be devised whereby the contents of the gall-tract could be secured as far as possible free from contamination by residues in the alimentary tract; these in fresh condition suited to chemical, cyto-

logical and cultural investigation and, if possible after such method as would enable one to localize from his data the significance of abnormal findings, with regard to disease, in the whole or specific segments of the gall-tract.

In connection with a study of the physiology of the neuro-muscular reflexes of the alimentary tract, in 1917, Meltzer of the Rockefeller Institute, appended to his report a foot-note. This states that he had observed that when water-solutions of magnesium sulphate were applied *directly* to the duodenal mucosa, *without such solutions having first come into contact with the gastric mucosa*, there followed a readily recognizable relaxation of the muscular wall of the duodenum, a co-incident relaxation of Oddi's sphincter at the papilla of Vater; within a brief period, contraction of the muscle-bundles in the gall-bladder wall, and discharge of bile into the duodenum. In normal humans, this sequence of events has been shown by Lyon, Brown and others to follow the direct application of solutions of magnesium sulphate to the duodenal mucosa through the duodenal tube. Its occurrence is in keeping with Meltzer's law of "contrary innervation" in other parts of the alimentary tract, namely, that in normal subjects, under stimulus, *relaxation* of a nerve-muscle segment of the gut occurs rhythmically in association with contraction of a neurologically interrelated, proximal segment of that gut. In the gall-tract, the sphincter of the common bile duct (Oddi's sphincter) and the muscles of the gall-bladder are supplied with inhibitory and motor nerve-fibres from the splanchnics and the vagus. These act antagonistically to each other, i. e., when stimulation of the inhibitory nerve fibres in the wall of the duodenum (and with it, Oddi's sphincter) causes relaxation of the gut (and of Oddi's sphincter) simultaneously (or soon following) there occurs stimulation of the correlated vagus motor nerve-fibres in the gall-bladder wall, with resultant muscle contraction and discharge of bile.

Although Meltzer's observations were made upon laboratory animals, he recognized their clinical importance and at his first presentation pointed out their possibilities of usefulness both diagnostically and therapeutically. This prophecy was shortly confirmed by the work of Rost

and of Vincent Lyon. Lyon introduced solutions of magnesium sulphate directly into the duodenum by means of the Rehfuß tube and was able then to aspirate, through the tube, bile freshly discharged from the gall-tract. Furthermore, he showed that bile, so obtained, could be visually segregated with practical accuracy, with regard to the segment of the gall-tract from which it came, namely, the common bile duct, the gall-bladder and the hepatic ducts. It further has been proven that by microscopic examination it is not only possible, from cytologic study of these freshly obtained gall-tract fractions, to secure definite information with respect to the *origin* of each fraction, but also to determine with considerable accuracy the *nature*, *degree* and *etiology* of pathologic processes existing in the gall-bladder and ducts.

Substances introduced into the duodenum, other than magnesium sulphate, are capable of causing relaxation of Oddi's sphincter, e. g., peptone, atropine or belladonna, benzyl benzoate, permanganate solutions, water, foods, etc., and sometimes the tip of a duodenal tube itself. Although such substances may cause dilatation of the duodenum and relaxation of Oddi's sphincter with consequent limited bile discharge, they do not act in accord with Meltzer's law as does magnesium sulphate: that is, they do not produce secondary contraction of the muscle-coats of the gall-bladder with resultant, frequently forceful, discharge of bile. Such special action appears to be a property peculiar to solutions of magnesium sulphate. In this respect, magnesium sulphate appears to have a specific action upon duodenal mucosa. It acts after the manner of a "duodenal hormone;" (as Lyon has quite appropriately stated), it relaxes Oddi's sphincter and causes gall-bladder contraction without, apparently, simultaneously causing the normal food-like stimulus to gastric and pancreatic secretion.

PART 2

For some years, I have been interested in the observation of variations in the duodenal contents of patients in health and disease. My curiosity was first aroused by attempting to prove the existence or the course under treatment of duodenal ulcer, by fractional titration of freshly removed duodenal residues. The fact that more

than 38 per cent. of our proved duodenal ulcers were complicated by disease of the gall-bladder, introduced a grave diagnostic error into whatever fractional duodenal-extract formulas we might construct as characteristic for duodenal ulcer. Furthermore, as our knowledge of the frequency of gall-tract complications in duodenal ulcer was more firmly established, it became a difficult problem to determine the bearing of bile-passages anomalies upon patients' symptoms, and introduced a not-to-be-disregarded factor into the significance of laboratory analyses of gastric and duodenal extracts. It was with the object of attempting to estimate the extent of gall-tract damage in association with duodenal and gastric lesions, that, a considerable period ago, my associates and myself took up the study of bile, secured through the duodenal tube after the method suggested by Meltzer.

At first our work was directed toward early and more accurate diagnosis of lesions of the biliary system, largely because we found it to be a widely established custom for physicians generally to seek elucidation of the cause of many vague dyspepsias (seemingly of right upper quadrant origin), by surgical exploration. We further learned, that competent surgical pathologists and surgeons at the operating table were not able to judge the normalcy or early disease in such gall-bladder and gall-ducts, even when these were exposed to eye and hand, and when not grossly deformed, stenosed, adherent or containing calculi. Not uncommonly in such circumstances a gall-bladder would be drained or removed *on suspicion* or after needling the gall-bladder and removing bile this would be grossly—rarely microscopically—examined or, if the surgeon could empty the gall-bladder and the ducts by compression, it was assumed that therefore the accessible biliary tract was free from disease and no operation was performed. In the latter circumstance, not rarely the exploratory operation was productive of no permanent relief to the patient after the physiologic rest demanded by convalescence, for, after a short or long interval, the old dyspeptic upset returned. Moreover, our studies of seemingly innocent-appearing gall-bladders, stone-free and emptying freely upon compression, but which had been removed, showed that just such types of gall-bladder, in-

nocent to sight and touch, returned the most pronounced evidences of active and progressive inflammation: these gave to us the greatest percentage of positive cultures when the tissue and the bile were carefully studied bacteriologically. The histologic damage could readily be demonstrated.

This definite evidence of damage to the gall-bladder, when such appeared grossly normal at operation, demonstrated the need of a more accurate method of ascertaining the status of the bile-tract in atypic dyspepsias, than was in vogue: for in truth the very gall-tracts which were most acutely infected and produced most annoying gastric upsets, were those commonly let alone surgically, because they could be emptied by compression, were not *grossly* deformed and *contained no calculi*. Surgically, little question ever arose with respect to the ability of a diseased gall-bladder to empty itself and its ducts upon normal, physiologic stimuli. Moreover these "innocent" gall-bladders with walls definitely infected and which were commonly neglected surgically, furnished the group which later became fibrosed, stenosed, adherent, the sites of calculi and, possibly, malignancy. In addition to the demand for a method of recognizing the gall-tract disease earlier than was common, it seemed that there was similarly an imperative need for the development of a system of treatment which should be actively directed toward the gall-tract, and which was not merely a dietetic or therapeutic "shot-gun." Moreover, since gall-tract—particularly gall-bladder—surgery has become so widespread, we have constantly had come for treatment an increasing number of patients upon whom all forms of technical operative procedures have been performed, and who still present anomalies of digestion, the major portion of which appears due to imperfect liver and bile tract function. After fairly extensive and critical experience, we consider that it is now possible to report dependably upon certain phases of the clinical usefulness of bile aspirated from the gall-tract through the duodenal tube, following the direct intra-duodenal introduction of magnesium sulphate solutions. The procedure has value both diagnostically and therapeutically.

The Diagnostic Worth of Meltzer's Method:

1. *Method of Work*—The procedure is simple;

it can be carried out in home, office or hospital; it requires little apparatus; it is not painful, and, as far as our experience goes, is not dangerous. The very simplicity of the method and its ease of application are, however, somewhat to its disadvantage, especially its use in diagnosis: it is apt to lead to slipshod, unreliable work. Unless the procedure is carefully performed, it will return little or no reliable information: it may, in fact, lead to harmful conclusions. *One must realize that the early diagnosis of disease of the bile passages is a chemical and microscopical one.* Specimens of bile should be carefully secured *with such purpose in view* and when obtained should be closely scrutinized, cytologically, culturally and chemically. For, if extensive destruction of the biliary tract is to be prevented, examination of freshly secured bile must be made before dyspeptic symptoms are pronounced, before obstruction to bile flow has occurred and previous to the time when a gall-bladder is distended, thickened, adherent or filled with calculi. Consequently, the patient should be properly prepared for examination, so that material aspirated through the duodenal tube is as far as possible uncontaminated by the contents of those portions of the alimentary and respiratory tracts proximal to the duodenum.

The *duodenal tube* (we prefer the Rehfuß type) should be thoroughly sterilized before it is introduced. This can be done only by boiling. It is kept in 10 per cent. liquor antisepticus solution until ready to be used. The subject appears for study after a 12 hour fast. He brings a tooth brush, spends five to ten minutes scrubbing his teeth and gums with a good paste and then thoroughly rinses his mouth and gargles with $\frac{1}{2}$ per cent. formalin solution. The tube is slowly fed to him from sterile gauze; its bulb reaches the stomach in a few minutes in all but very sensitive patients. (To these, a small dose of atropin or benzyl benzoate solution may be given a half hour previous to the passage of the tube.) In very irritable subjects, the bulb may be directly passed to the stomach by the obturator of a Kanaval tube. When the bulb is in the stomach, lavage is performed, with an abundance of sterile water at 80 degrees F: and this lavage followed by a second lavage with hot 3 per cent. liquor antisepticus solution, until

the fluid returns perfectly clear and free from mucus or epithelial sediment. The esophagus can be relatively sterilized by lavage with water and liquor antisepticus as the bulb travels to the stomach, but this is rarely required if the stomach be cleaned thoroughly since the normal esophagus does not harbor great numbers of bacteria, particularly when the mouth and throat are clean. When the esophagus is suspected of being bacterially befouled, the patient may be given eucalyptus lozenges and directed to dissolve one in his mouth, hourly, for a day previous to coming for study.

When the stomach has been cleaned, the patient, lying in the Sim's position, swallows from ten to twenty cm. more of tube, in order that the duodenal bulb may pass through the pylorus. In the average subject, this occurs in from a few minutes to 1½ hours. Where obstinate pyloric spasms holds the bulb in the stomach, we have found that its passage is facilitated by passing through the tube to the stomach, one to two

scopically, by the constant aspiration of pearly-gray, alkaline, pancreatic juice often bile tinged, by the peristaltic "tug" of the active duodenum, or occasionally by the patient's subjective sensations of the bulb passing the pyloric sphincter or its lying outside the gastric zone. With the duodenal bulb at an optimum of from 10 to 15 cm. beyond the pyloric ring (that is, just beyond the average distance from the pylorus of the entrance of the common bile duct into the duodenum) lavage with sterile water at 80 degrees F. and later 3 per cent. solution of liquor antisepticus, is carried out until perfectly transparent, sediment-free duodenal residues are returned. We have not considered it advisable to complete the duodenal lavage with the astringent solution (so-called "lavoris") suggested by Lyon. It has seemed to us that the introduction of a nostrum such as this were not good practice, and especially, because the action of such an astringent as zinc chloride upon the duodenal mucosa might interfere with the action of magnesium sulphate.

The patient is now ready for the introduction of the magnesium sulphate solution. It is our

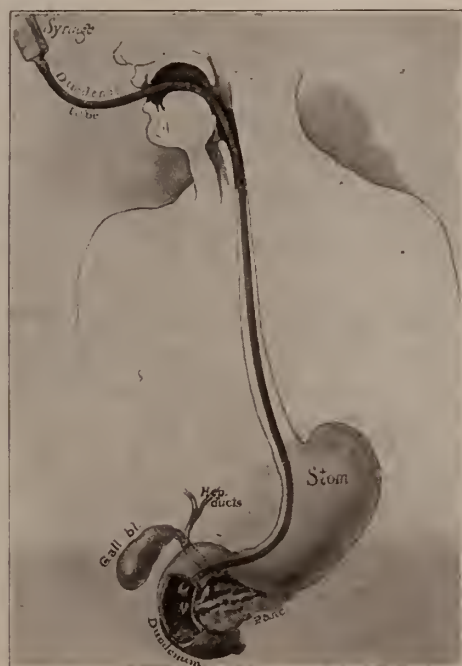


Fig. 1. Sketch indicating position of duodenal tube and bulb in non-surgical biliary tract aspiration. (Drawn by Tom Jones.)

drachms of 20 per cent. solution of benzyl benzoate in 2 ounces of sterile water or twenty drops of tincture of belladonna. The entrance of the bulb into the duodenum is proved fluoro-

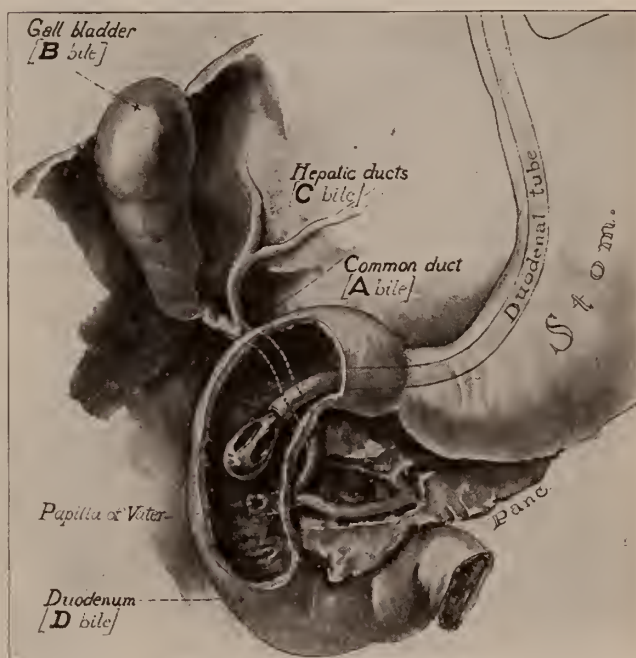


Fig. 2. Sketch detailing sections of duodenum and biliary tract in relationship to bile fractions secured upon non-surgical biliary tract drainage. D, duodenal fraction; A, common bile-duct fraction; B, gall-bladder fraction; C, bile fraction from hepatic ducts and their radicles. (Drawn by Tom Jones.)

custom to introduce slowly, through the duodenal tube by means of a sterile syringe, 25 c.c. of 33 per cent water-solution of magnesium sulphate at a temperature of 85 degrees F. This solution is allowed to remain in the duodenum from one to three minutes and is then slowly aspirated by means of a glass syringe. It is commonly clear and bile-tinged immediately; later, if the common bile-duct is patent, it becomes definitely so. This material is tested for alkalinity by Toepfer's reagent and if alkaline, is placed in a separate sterile container, marked "D," to be sent to the laboratory and examined for pus, blood, mucus, epithelium and bacteria. If patients be not examined after a 12 hour fast, or if gastric irritability has resulted in continuous secretion, the duodenal extracts may persistently return opalescent. This is due to precipitation of bile salts by hydrochloric acid. It seriously interferes with study of the specimens segregated from the several segments of the gall tract.

2. *Significance of Aspirated Fractions*—In normal subjects, following withdrawal of the magnesium sulphate solution, there results a characteristic sequence of events, provided careful and frequent aspiration be continued. First, there are secured from 2 to 15 c.c. of thin, light, golden-yellow bile, which quantitatively (and if further proof be needed, cytologically), evidently comes from the common bile duct. This is collected in a sterile container for study and marked "A." As the common duct bile flow ceases, normally it is possible readily to aspirate and with rather surprising suddenness, from one to three ounces of thick, syrupy bile, fairly clear and of a brownish-gold color: a color always deeper than is that bile obtained from the common duct. Cytologically (from the presence of columnar epithelium), in view of its quantity, and from the observation that after cholecystectomy this sudden gush of a large volume of dark colored bile is not secured, it is evident that this material comes from the gall-bladder. This speci-

men is also collected in a sterile container and studied, marked "B" bile. This abundant gall-bladder flow usually ceases abruptly. If aspiration be diligently continued, there follows a varying quantity of normal appearing, thin, clear, light golden-yellow bile, which cytologically can be shown to be hepatic duct and freshly secreted liver bile. It is thus apparent that the characteristic sequence of events described, permits, by Meltzer's method, reasonably accurate gross segregation of biles from the duodenum ("D" bile), from the common duct ("A" bile), from the gall-bladder ("B" bile), and, from the hepatic duct and liver ("C" bile). The specimens obtained from these segments of the biliary passages can be further and more *definitely differentiated* by microscopic examination. Inasmuch as disease of the liver and gall tract produces alterations recognizable in the bile bathing them, each bile specimen must be studied with respect to color, quantity, rate of flow, consistency, trans-

1002 N. Dearborn Street, Chicago

GALL-TRACT DRAINAGE

Name <u>Mr. Albert S.</u>		Case No. <u>a 3371</u>	
Address <u>Chicago</u>		Place <u>Room 4</u>	Date <u>2/11/21</u>
Physician <u>S.K.E. & O.</u>		Acute, Subacute or Chronic <u>Chronic</u> Fever, Jaundice, Colic <u>Colic</u>	
Diagnostic Therapeutic Hospital No. <u>Office Case</u>		No. of Drainage <u>0, 2, 3, 4, 5, 6, 7, 8, 9, 10</u>	
ANTI-SPASMOLIC GIVEN		ANTI-SPASMOLIC REPEATED	
NATURE	TIME	NATURE	TIME
<u>Bile</u>	<u>9:00</u>		
Mo. SO. GIVEN		Mo. SO. REPEATED	
AMOUNT	STRENGTH	AMOUNT	STRENGTH
<u>60 c.c.</u>	<u>1/3</u>		
Mg. SO. Aspirated		Mg. SO. Re-aspirated	
AMOUNT	COLOR	AMOUNT	COLOR
<u>30 c.c.</u>	<u>Bile Stained</u>		
General Description Final Drainage		Spontaneous Discharge	
<u>See Over.</u>		Amount <u>35 c.c.</u>	
Duodenal Lavage (Hot Liquor antisept. alkaline)		Nature <u>Duodenal Bile</u>	
After Care <u>Sodium Salts & Ox Gall - Routine Diet (Low protein Low fat)</u>		Yeast <u>++</u>	
Clinical Diagnosis <u>Cholecystitis - Cholelithiasis - Duodenitis</u>		Microscopical <u>B. Coli + + + +</u>	
		Blood Agar	
		Bacteriological <u>B. Coli only</u>	

Fig. 3 (a). Specimen of record form for use in non-surgical biliary tract drainage. (Original.)

NATURE OF OBSERVATION	"D" BILE		"A" BILE		"B" BILE		"C" BILE	
	GROSS	MICROSCOPIC	GROSS	MICROSCOPIC	GROSS	MICROSCOPIC	GROSS	MICROSCOPIC
1-Quantity	150 c.c.		10 c.c.		350 c.c.		None	
2-Rate of Flow	Rapid		Rapid		Slow			
3-Color	lt. Amber		Amber		dk. Brown			
4-Odor	Usual		Usual		Usual			
5-Consistency	Mucoid		Mucous		Mucoid			
6-Transparency	Opaque		Translucent		Opaque			
7-Mucus	++		+		+			
8-Pus	0	0	0	0	0	0		
9-Blood	0	0	0	0	0	0		
10-Calculi		0		0	0	0		
11-Cytology		Few Epith. Cells		Few Epith. Cells		Few Epith. Cells		
12-Organisms		B. Coli		B. Coli		B. Coli		
13-Crystals		0		0		0		
14-Cultures						B. Coli only		
15-Flocculi	++		0		+			
16-Sediment	+		Slight		+			
17-								
18-								

OBSERVER

L. L. E.

Fig. 3 (b). Obverse of Fig. 3 (a).

parency, the presence of gross mucus, pus, blood and calculi. *Microscopically*, observations are made with respect to the finding of pus, mucus, blood-cells, bile pigment, crystals, epithelium and micro-organisms, bits of mucus, epithelial debris, and the fluid biles are later cultured upon blood agar and plain agar and in glucose broth and bouillon.

By this intensive and special segmental study of bile removed directly through the duodenal tube, it is practically possible to determine, not only the *location* of gall tract affections, but also to add valuable information with regard their *etiology*, and the *variation* in their degree and kind in the several segments of the bile tract and liver.

PART 3

Material—In our clinic, direct biliary tract aspiration has assumed the position of the most useful procedure at our command in the elucidation of pathologic processes associated with dyspepsias more or less sharply defined as being of extra-gastric origin. In patients affected with frank gastric or duodenal ulcers, we have come to consider it necessary to study the state of the gall tract before we consider it possible to properly advise or direct treatment. Following operations, upon the gall-bladder, cholecystectomy or cholecystostomy, from the information learned by the study of bile directly obtained from the gall tract, it has become constantly more evident that, frequently, operative measures directed toward the gall-bladder have only eradicated a portion of the disease—they have been incomplete because, associated with the local gall-bladder pathology, simultaneously, there has existed infection of the bile ducts, even so far as their small ramifications in the liver.

It might be mentioned here that of patients upon whom gall-bladder operations had previously been performed and who later appeared with dyspepsia, our bile studies indicate, that, in more than 70 per cent. of instances, *inflammation with infection, still persisted* in the large or small bile ducts.

To date, we have made observations upon approximately 650 direct non-surgical, biliary-tract drainages, in 300 patients. In each patient, diagnostic drainage was performed, and in a number of patients repeated drainages were instituted,

as a method of treatment. While it is not possible at this time to consider each patient separately, yet, it would seem useful to call attention to certain important phases of the work.

(1) *Failure to secure Biliary Tract Aspirates*—In rather less than 11 per cent. of patients (even when the histories and physical examinations pointed to no obstructive lesion in the biliary-tract), it was not possible to secure bile from the gall-tract at first attempt. The causes for this failure appear to be (a) marked pyloric or duodenal spasm causing incomplete passage of the duodenal bulb or occlusion of its perforations, (b) kinking of the duodenal tube, (c) failure of the bulb to lie in proximity to the papilla of Vater (either considerably above it or far below, the bulb then passing to the jejunum), (d) failure of the magnesium sulphate to arouse Meltzer's duodenal reflex (faulty innervation, chronic atrophic duodenitis, backflow of magnesium sulphate into the stomach, rapid escape of magnesium sulphate from the duodenum as result of vigorous local peristalsis (?), (e) occlusion of the papilla of Vater or the pancreatic, common-bile, cystic or hepatic ducts from thick bile or mucus, calculi, new growths, adhesions, twists, kinks, external pressure or acute inflammatory disease, or, (f) to not-yet-understood, inhibitory, secretory reflexes (excitable women with headaches, advanced aesthenia, etc.). On the second or third attempt, in the groups above described, the percentage of unsuccessful aspirations was reduced to about four. It is quite likely that this failure arose from errors in technique or to the choosing of cases which were not suited to the method.

(2) *Selection of Cases*—As result of our experience, we venture the opinion that, except in rare instances (acute obstruction, perforation, marked inanition, etc.) operative procedures upon the gall-tract are not justified without previous diagnostic biliary-tract aspiration. Such aspiration, properly performed, permits the surgeon to prognose in a striking fashion, before laparotomy, the condition which operation will disclose. Instances are of common enough occurrence, where the pre-laparotomy knowledge of the state of affairs in the biliary-tract, proves of the greatest value with respect the planning of operative procedures, rapid and efficient tech-

nical maneuvers, and the prognosis with regard to the post-operative course. Certainly, it is of practical use for a surgeon to know previous to operation that a common bile duct is free from obstruction, inflammation or infection, but that the cystic duct is occluded or that a gall-bladder, enlarged and static, is filled with infected bile, or again that little disease exists in the common duct or gall-bladder, but that the hepatic duct and its radicals are definitely and extensively involved. Striking though it may seem, properly conducted biliary-tract aspiration after the method of Meltzer, enables the pre-laparotomy determination of facts such as these almost consistently to be possible. Furthermore, it is valuable information for a surgeon to know that removal of an infected gall-bladder will not constitute a complete and satisfactory surgical operation when there are to be left behind infected bile ducts. Not rarely, the pre-laparotomy knowledge of such extensive infection will determine the operative procedure—the alert surgeon will not simply remove a gall-bladder, and then sew up the ducts and the abdominal wound tightly, but, rather, he will perform cholecystostomy and insist upon drainage prolonged until cytologic and cultural examination of excreted bile show that inflammation in common duct and hepatic duct radicals has subsided.

(3) *Interpretation of Biliary-Tract Aspirates*—Securing, constantly, duodenal residues without common-duct bile indicates obstruction at or hepated the papilla of Vater. If, in association with this finding there are clinically, jaundice and large gall-bladder, it is evident that obstruction is in the common bile duct at or distal to the cystic duct. If bile from the common-duct and the hepatic ducts is obtained, with absence of gall-bladder aspirate, and there is an associated gall-bladder tumor or fulness or palpation tenderness, it is evident that the cystic duct is obstructed. If biliary-tract aspiration returns but a small quantity of common duct and gall-bladder bile but no hepatic duct bile, or shows hepatic duct bile loaded with blood, pus or precipitated bile salts, it should not require laparotomy to demonstrate that there exists serious liver and biliary-tract malfunction (commonly, calculi with infection) against which surgical procedures carry little hope. The securing of

normal common-duct bile, but altered gall-bladder bile, or a quantity greater than 100 c.c., points to dilatation of the gall-bladder with bile stasis and usually infection. In some instances, the constant gall-bladder residue may be strikingly increased. From one of our patients were secured more than 2 liters of foul, mucu-purulent, greenish-black, gall-bladder bile, laden with epithelial debris, cholesterin, bile-pigment, colon bacilli and streptococci. In this patient, duodenal, common-duct and hepatic duct bile were practically normal. The withdrawal of large quantities of bile from the gall-bladder can, not infrequently, be proved to coincide with disappearance of right upper quadrant tumor and very definite alterations in the size of the liver. Further, it should be a rule in all hospitals and clinics, that no patient upon whom cholecystectomy has been performed be discharged from a surgical service without first having a diagnostic biliary-tract aspiration. Our work proves that there certainly are many cholecystectomized patients discharged from hospitals who still have active infection in the bile passages; in such circumstances only a limited prognosis with respect to permanency of good health can be given. As an operation, cholecystectomy can be considered a successful procedure only when biliary-tract aspiration, *subsequent to the operation*, returns bile which is normal, cytologically and bacteriologically. Similarly, when cholecystostomy is performed, and drainage instituted, it would seem unwise to permit drainage to stop, so long as bile showing active infection and evidences of inflammation is being discharged.

(4) *Failure of Non-Surgical Biliary-Tract Drainage to Indicate Anomalies When Definite Pathology Exists*—In a study of 1,000 operatively demonstrated instances of gall-bladder disease, which I reported more than 5 years since, examination of freshly secured bile showed active infection in 28.6 per cent. of cases. By culturing the bile, however, and allowing sufficient time for attenuated bacteria to grow, it was shown that a total of rather more than 63 per cent. of biles contained viable bacteria. These figures were returned from practically all types of gall-bladder disease: in 57.4 per cent. of cases, the ailment was so pathologically chronic as to reach the calculus or the neoplasm stage. From

the foregoing facts it is evident that, in biles secured from *gall-bladders*, where pathology is *advanced sufficient to warrant surgical intervention*, it is to be expected, *that if bacterial growths are to be looked upon as the sole evidence of disease*, non-surgical biliary-tract aspiration will return no proof in approximately 37 per cent of cases. Our studies have shown, however, that even when the aspirated gall-bladder biles have returned no positive bacterial cultures, *other evidences of disease* commonly were not lacking, provided careful search for such were made. In these circumstances, the more important anomalies were (a) the securing of greater than 100

symptoms, biliary-tract aspiration will return definite evidence of such, by careful observation of the volume and kind of bile secured segmentally. Even in those infrequently occurring cases of peri-cholecystitis, where the gall-bladder or duct mucosa are not damaged, there are few instances where the aspirated bile is normal, quantitatively, grossly and cytologically. As we have already mentioned, if the common bile, cystic or hepatic ducts are occluded from any cause, study of bile from hepatic portions of the gall-tract is not possible, even though, could it be secured, it might show readily demonstrable anomalies. In such circumstances, much diagnostic information

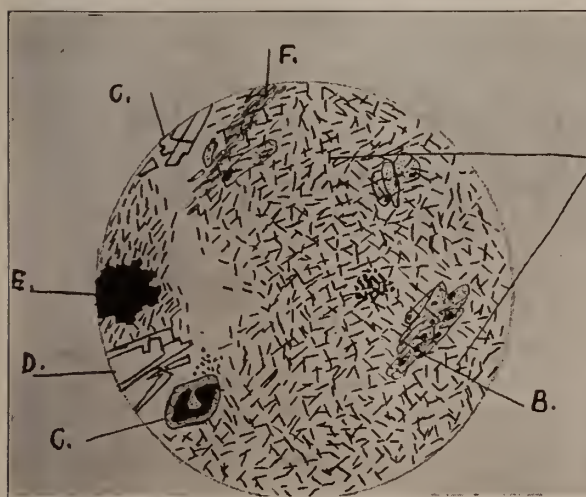


Fig. 4. Mrs. W., clinically, obscure anemia, "secondary type," with dyspepsia. A, enormous mass of colon type bacilli almost in pure culture; B, desquamated gall-bladder epithelium; C, polynuclear leucocyte; D, masses of cholesterin; E, amorphous collection of bile salts; F, budding yeasts. (Drawn from fresh specimen by author.)

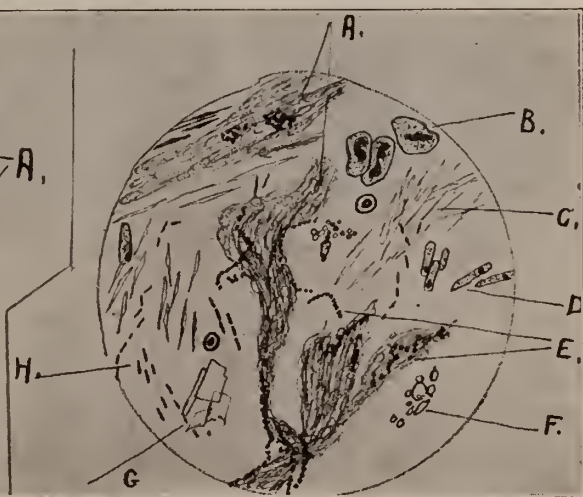


Fig. 5. Mrs. W., clinically, "pernicious anemia." Note—A, mucus mass, bacteria-laden; B, polynuclear leucocytes; C, mass of soap needles; D, desquamated epithelial cells; E, streptococci, chains and groups; F, budding yeasts; G, cholesterin plates; H, bacilli, colon type, chains and singly. (Drawn from fresh specimen by author.)

c.c. of gall-bladder bile; the quantity recovered averaged 292 c.c. the maximum was 2,800 c.c.; (b), abnormal gross appearance of bile secured, even though quantity be not greater than 100 c.c., bloody, dark, colored, turbid, thick mucoid bile of high specific gravity, with heavy, sometimes gritty, sand-like sediment; (c), recovery of small calculi; (d), on microscopic study, pus, desquamated, flat-columnar epithelium, excess cholesterin, soaps, bile salts and mucus—rarely, cells showing atypic nuclei, in malignant disease. Perhaps our experience is not as yet sufficiently extensive, but we are of the opinion as a result of our studies, that in practically all instances where the gall-bladder is so diseased as to cause

is secured, however, by *proving the absence* of one or all the fractions normally secured from the several biliary-tract segments.

In our experience, there are very few patients in whom the *gall-ducts* are diseased, where aspiration of bile fails to return evidence of that disease. Our work indicates, that more commonly than has been considered, bile-duct inflammation, imperfect emptying or distension exists, in association with or independently of gall-bladder pathology. Indeed, instances are common enough, where the gall-bladder ailment has been considered the source of pain and dyspepsia, and yet bile-tract aspiration indicates normal gall-bladders but very definite pathology in the common-

bile and hepatic ducts. The average quantity of bile removed from the common-duct was 33 c.c.—the maximum 175 c.c. In 33 per cent. of cases, where the gall-bladder-bile was in every way normal, the duct bile presented definite evidences of disease.

(5) *Biliary-Tract Aspiration Showing Disease, where, Clinically, no Direct Evidence Points to such Upset*—From patients affected with obscure "toxic" or roughly called "metabolic" disturbances; from instances of rheumatoid arthritis and peri-articulitis where all external infectious foci have been eradicated with no halting of the disease; from subjects with chronic heart lesions—muscular or valvular—aggravated by extra-gastric types of dyspepsia; from cases of advanced anemia (pernicious, "hemolytic" or "chlorotic") of indefinite cause; from patients, the victims of "migrain," with or without dyspeptic storms; from cases of cirrhosis of the liver, often with portal embarrassment and splenomegaly; from patents affected with epilepsy or epileptiform attacks, commonly preceded or accompanied by digestive upsets, and from the subjects of colitis, associated with irregular periods of intestinal stasis or diarrhea, we have, by biliary-tract aspiration, proven that quite commonly, definite—often very extensive—pathology existed in gall-bladder, common or hepatic ducts or the finer radicals of the latter. We are convinced that in the above groups of ailments lies an important field for investigation, along lines of diagnosis and possibly therapy. At present, non-surgical biliary-tract drainage offers the only way by which such investigation can be carried on.

(6) *Macroscopic Abnormalities of Bile Secured by Meltzer's Method.* (a) *Appearance*—Any constantly alkaline, duodenal aspirate which is clouded, turbid, blood or pus or mucus laden can be considered as coming from an abnormal duodenum, the seat of ulcer or chronic inflammation. (b) An alkaline, common bile-duct fraction of greater volume than 15 c.c. suggests local stasis; if the bile is turbid, of specific gravity greater than 1,015, exhibits gross blood, pus, crystals, calculi, strings or flocculi or mucus and on standing deposits an abundant sediment, it means duct disease. (c) **Gall-bladder bile fractions** of more than 100 c.c. and with specific gravities higher than 1,020 are abnormal; they indi-

cate bile stasis. When these fractions likewise exhibit foul odor (the musty, penetrating colon type of infection is readily recognized), gross blood, pus, "sand," mucous gobs or abnormal color, there is little doubt of the presence of active disease in that portion of the gall-tract from whence they came. The quantity of gall-bladder bile may be astonishingly large—more than 2,800 c.c. in one of our cases. The *color* (at the time of aspiration) varies from yellowish brown or green to pitch black. The *consistency* from watery to that of thick paste or glue. In 5 instances we have aspirated pure, greenish-yellow pus. In 17 aspirates, the gall-bladder fraction showed abundant blood and in these cases, blood occurred in that fraction only. In 26 gall-bladder aspirates, definite, "sand-like" sediments quickly formed on standing; sometimes such sediment equalled as much as a twelfth the volume of all the bile obtained. *Hepatic duct* bile shows the fewest anomalies except in quantity; it is a curious phenomenon, that even when the normal 5 to 15 c.c. of bile has been secured from this portion of the hepatic duct tree, not rarely, there follows an abundant flow of, seemingly, grossly normal bile—in some instances, this amounts to a veritable hepatorrhea, a liter or more grossly normal, liver bile being readily collected. In 2 of our cases, so-called, "white bile," in greater than 500 c.c. quantity, was secured. We are not able to offer an explanation for this. When coming from diseased hepatic ducts and their liver ramifications, the bile is thick, turbid, of specific gravity higher than 1,015, mucoid, slow-flowing and rich in sediment exhibiting pus, blood, mucus and crystals. It may have foul odor—i. e.—typhoid and colon bacilli carriers.

(7) *Microscopic Study of Fractional Bile-tract Aspirates*—Specimens must be studied very soon after they have been secured, if one is to obtain full information. Disintegration of the formed elements of bile occurs rapidly. Tardy examination, microscopically, yields only imperfect or partial facts. If specimens cannot be studied at once, they should be sealed in test-tubes and kept in an ice box until it is convenient to make the necessary examinations.

Smears from each segmental gall-tract bile fraction are prepared. For securing information regarding crystals and pigment, a set is prepared unstained. For the study of epithelium, pus,

blood-cells, bacteria and fat a set is prepared and stained with polychrome methylene blue, Wright's or osmic acid. All microscopic specimens are studied with high power, oil-immersion lens. The unstained specimens should be examined by indirect light.

sembled the hanging-drop examination of a bacterial culture) or be covered by great masses of degenerating epithelium, bile-like deposits of cholesterin and leucin, clumps of mucus infiltrated with pus and blood cells and bacteria or irregular masses of precipitated bile salts and

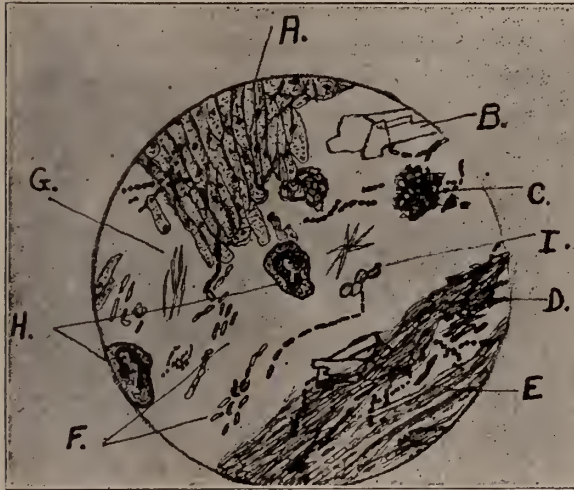


Fig. 6. Mr. C., clinically, "pernicious anemia." Note: A, epithelial plaque (columnar, or gall-bladder, form); B, cholesterin crystals; C, amorphous bile salts; D, chains of streptococci; E, mucus mass; F, bacilli (colon type); G, soap needles; H, polynuclear leucocytes; I, red blood cells. (Drawn from fresh specimen by author.)

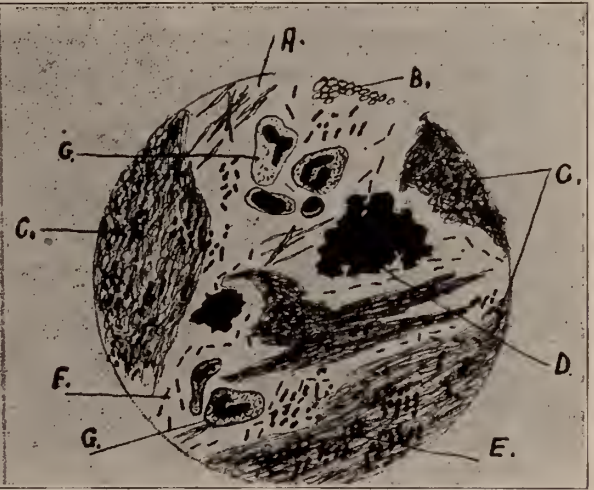


Fig. 7. Mrs. G., clinically, "rheumatoid myositis" of obscure origin, dyspepsia of long standing, anemia. Note: A, soap needles; B, yeast colony; C, great masses of bacteria-laden mucus; D, large mass of amorphous bile salts; E, colonies of diplococci; F, colon-type bacilli; G, polynuclear leucocytes. (Drawn from fresh specimen by author.)

Interpretation—In normal duodenal fractions, one obtains a few epithelial cells, an occasional leucocyte, pus or blood cell, a small quantity of bile constituents with a few bacteria (often colon type or cocci). In disease, epithelial debris, pus and blood, bacteria laden mucus, and numerous micro-organisms are markedly increased, particularly in the sub-acute or the acute infectious ailments. *Common-duct* bile fractions, in normals, usually contain an occasional flat, columnar epithelial cell, a few fat needles and leucin or cholesterin crystals; in disease, epithelial plaques, phagocytic polynuclears, germ infiltrated mucus, masses of bile pigment, clusters of cholesterin and enormous numbers of bacteria are readily seen. When the *gall-bladder* bile is normal, small clumps of crystals, bile pigment and epithelial debris with a few bacteria can be observed. In gall-bladder disease, the microscopic picture is striking—even more striking than is that of a urine secured from a badly infected urinary bladder. In these circumstances, the field may swarm with bacteria (some of our specimens re-

fat. We have often enough observed that bile which did not appear exceptionally abnormal in quantity or kind, on gross examination, exhibited most marked evidences of gall-bladder disease, when properly prepared smears were studied microscopically. *Hepatic duct and liver* bile fractions, less constantly show anomalies than do bile from other gall-tract segments. In normals, the microscope may show nothing more than an occasional crystal, leucocyte or bit of bile pigment. Where hepatic duct or liver infection is present, the microscopic field generally swarms with micro-organisms, and is thickly covered with pus, blood, crystals and pigment. It might be valuable to here again emphasize that the hepatic duct and its liver radicles is much more commonly involved in choledochitis and cholecystitis than has been formerly thought. This observation aids in explaining the failure of a certain group of patients to make satisfactory recovery following the most expert technical surgery directed toward gall-bladder and ducts.

(8) *Cultural Studies of Aspirated Bile*—Each

fractional specimen of aspirated bile should be cultured on several kinds of media, even when, grossly and microscopically, the bile presents no striking anomalies. In this paper I have already called attention to the observation made in my clinic that although but 28.6 per cent. of biles, in a large series, exhibited bacteria on *direct smear*, yet on *culture*, 63 per cent. of such biles gave growths. No further comment is needed to emphasize why cultural study of the aspirated fractions is necessary.

Bile implants should be made in bouillon, on plain and blood agar, in glucose broth and modified Drigalski-Conradi media. Further, inasmuch as it seems to us that, not rarely, certain bacteria of bile are attenuated, sufficient time should be permitted to elapse before a culture can be said to be blank—certainly, a week to ten days is not too long a growth period. After cultures have been examined, microscopically, by direct smears, growths should be preserved or transplanted, with the object of later preparing autogenous vaccines.

Apart from cultures the gall-bladder fraction of bile contained small form yeasts seven times and flagellate protozoa five times.

In our series, there were 22 per cent. of biles, atypic so far as quantity, cytology and crystalline deposit were concerned, from which we recovered no growths on culture. This is a useful fact, not only because it shows that definite damage may exist in gall-tracts when viable bacteria are not demonstrable, but also since it proves that alimentary tract contamination of aspirated bile may be prevented when proper care is taken.

PART 4

Non-Surgical Biliary-Tract Drainage as Part of a Therapeutic Regimen in Ailments of the Bile-Passages and the Liver—In such abnormal states, the function of all treatment should be to prevent stasis of bile in any or all parts of the gall-tract and liver, to eradicate infection, constantly present or recurring intermittently and to aid in repair of damage produced by bile stasis and infection.

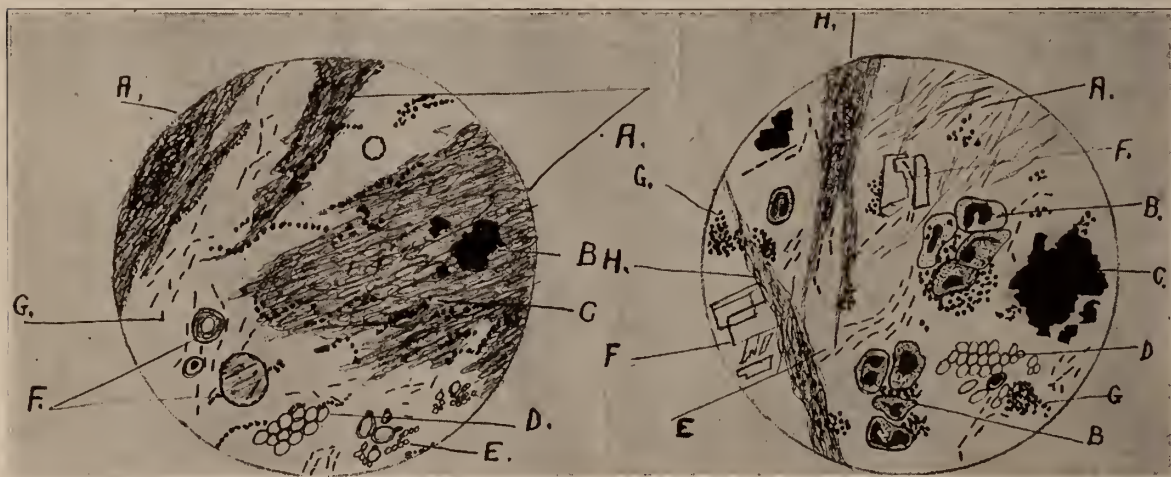


Fig. 8. Mr. G., clinically, dyspepsia of extra-gastric etiology. Note: A, thick masses of mucus-laden with bacteria; B, amorphous bile salts; C, streptococci in mucus; D, red blood cells; E, budding yeasts; F, leucin; G, bacilli of colon type in short chains and singly. (Drawn from fresh specimen by author.)

Fig. 9. Mrs. F., clinically, pyloric spasm in association with cholecystitis. Note: A, great masses of soap needles; B, groups of phagocytic polynuclears; C, amorphous bile salts; D, red blood cells; E, bacilli, chains and small groups; F, cholesterol, much increased in amount; G, staphylococci; H, mucus, with bacteria intermixed. (Drawn from fresh specimen by author.)

In our series we have recovered by culture, in the order of their incidence, the following organisms: colon type bacillus, streptococcus colony-typhoid group, staphylococcus, influenza-like bacillus and coccus, micrococcus "catarrhalis" diplo-coccus, diphtheroid bacillus.

Instances are of sufficiently frequent occurrence, where infection, inflammation and bile stagnation have caused such pathologic change as to call for early and radical mechanical relief by surgery. It is a mistake to offer relief for such conditions by non-surgical measures: while

trial of various agents is being made, serious damage may ensue—even to malignancy—in bile-passages and liver. This must not be forgotten by those enthusiasts who see possibilities in clinical therapeutics in the Meltzer non-surgical biliary-tract drainage. If this is forgotten, the method will fail in serving as a valuable addition to our therapeutic armamentarium.

All who have had actual experience with the Meltzer method agree that, by this method, one is able to recognize disease of the gall-tract earlier than by any other clinical procedure. Since this is true, then by careful regimen, it would seem that we have an opportunity to directly treat liver and bile passage affections before they have become sufficiently advanced to produce malformations, obstructions, calculi or malignancy. Such should be possible in many patients by taking those instances where the ailment is not far advanced, and by preventing bile stasis and eradicating infection, thus permit injured mucus membranes, muscle layers and serosa to heal. In our clinic, we have endeavored to carry out this line of treatment.

Classes of Patients—We have found the method useful in patients ill as follows:

1. Acute, infectious choledochitis or cholecystitis, frequently in association with acute, infectious ailments: pneumonia, pleurisy, lagrippe, tonsillitis, etc.

2. Acute toxic cholecystodochitis and hepatitis, with jaundice and large liver—ptomain poisoning, arsenobenzol poisoning, etc.

3. Biliary stasis, with or without active acute or subacute infection, in association with acute or chronic heart disease; a class where the risk of surgery is great and yet dyspepsia and abdominal distress demand relief. This group of patients has frequently been commented upon, particularly by Babcock and by Reisman.

4. Gall-tract stasis and infection in the liver cirrheses, acute or chronic.

5. Gall-tract stasis, infection and intoxication in the severe anemias, particularly "hemolytic" or "pernicious" anemia, leukemia, Banti's disease, chlorosis.

6. Dyspeptic storms, "biliousness," in conjunction with migraine, epilepsy, etc.

7. Chronic or acute "rheumatoid" infections, where all extra-abdominal foci of infection have

been removed, and yet the progress of the disease not been altered appreciably.

8. Gall-tract and liver stasis and infection in association with diabetes, where operation is attended by grave risks or is impossible.

9. Empyema of the gall-bladder with acute duct-infection, where surgery is not available or warranted or is attended by very serious prognosis.

10. Duodenal or duodeno—pyloric ulcer, frequently recurring, particularly when occurrences coincide with "bilious" or atypic ulcer attacks, and where proper surgery is not available, is not permitted or the subject is unsuited.

11. Dyspepsia of gall-tract origin in patients affected with serious endocrine disturbances, particularly Graves' disease, toxic fetal adenomata, pancreatitis, Addison's disease—patients, who are unable to undergo further surgery than that, for example, on the thyroid.

12. Patients with intestinal stasis, with recurrent gall-tract type of dyspepsia and with "mucus colitis."

13. As previously mentioned, following operations upon the gall-bladder and gall-ducts the detection and eradication of infection is possible by no clinical procedure other than trans-duodenal drainage.

14. Secondary acute or subacute gall-tract infections in individuals with acute mastoid, middle ear or cerebral disease.

15. Subacute, non-obstructive, non-calculous choledochitis, pancreatitis, cholecystitis.

16. Gall-bladder stasis, acute or chronic, not complicated by calculi or neoplasm.

Method of Employing Non-Surgical Biliary Tract Drainage in the Treatment of Suitable Cases

(a) *To relieve stasis existing in gall ducts, gall-bladder and liver.* Accordingly as bile stasis can be proved diagnostically to exist in gall-bladder, common duct or liver radicles, trans-duodenal drainage is instituted daily or at intervals of two or more days. To facilitate matters, it is advisable, but not absolutely necessary, to have the patient in hospital during the first two or three weeks of the treatment period. Biliary-tract drainages are continued until bile, as nearly as possible normal, grossly, cytologically, and culturally, is recovered from each segment

of the gall-tract. Cases are of frequent enough occurrence in the routine carrying out of this work, where a gall-bladder or a gall-duct initially rich in bacteria, pus, crystals and epithelial debris, returns practically normal bile fractions from each segment of the biliary tract in from three to six aspirations.

After each biliary-tract aspiration, the duodenum is thoroughly lavaged through the Rehfuß tube with several liters of 3 per cent. liquor antisepticus solution. After the lavage before the tube is withdrawn, an ounce of castor oil or two drams of old-fashioned bitter extract of cascara sagrada is injected into the duodenum. This is done in order that bacteriologically foul bile freshly excreted from the papilla of Vater and not perhaps secured by aspiration through the duodenal tube, may not remain in the small or large gut as a possible source of infection to injured mucosa. Before we adopted this procedure, we had several patients, in whom, following biliary-tract aspiration, it seemed that an acutely appearing toxic state came from infected bile in the lower bowel, and not from, as we had first thought, the patient's having an idiosyncrasy with respect to magnesium sulphate.

Following therapeutic biliary tract aspiration, the patient is kept on very soft or liquid, low-protein and low-fat diet for eighteen to thirty-six hours. Frequent small feedings are advised in order that by stimulating from within the duodenum the demand for bile, physiologically the liver and biliary-tract may be kept empty. We have thought best to limit the protein and the fat of the diet in order that digestive demands upon the liver itself and the upper alimentary tract should be reduced to the minimum. With such physiologic rest, healing of injured mucosa, glands and muscle layers would probably be accelerated.

In thirty-six hours subsequent to the non-surgical drainage of the bile passages, we administer from seventy-five to one hundred grains of sodium salicylate in broken doses. While salicylates are probably excreted by the liver and hence may exert a certain local anti-bacterial influence in the bile passages, the extent of such excretion and antiseptis is problematical. Our object in exhibiting a large dose of salicylates is to secure action antagonistic to bacteria in the

wall of the bile passages and in the liver at a time when the systemic circulation is least embarrassed locally. Inasmuch as experimental evidence and our own experience indicate that from the bile and from the wall of nearly 70 per cent of biliary tract disease cocci may be recovered and these cocci are of the so-called "rheumatoid, group," salicylates are exhibited to act against these rheumatoid organisms after the fashion in which such remedy acts in rheumatoid disease wherever it may be located.

(b) *To eradicate infection in gall-tract and liver.* Frequent trans-duodenal aspiration systematically carried out with after-care as above described have certainly proved valuable in our experience to promote healing of infection foci in liver and bile tract. Where infection is chronic or subacute, the fight against it is more successfully waged if, at the diagnostic aspiration, the biles are carefully cultured and from these cultures autogenous vaccines are prepared. Such autogenous vaccine may be injected in increasing amount (from an initial 150 millions upwards) every fifth day. Such therapy is of especial service in mixed infections and in chronic typhoid and colon bacillus carriers.

(c) *Where gall-tract inflammation is chronic and of low grade or is intermittently acutely or sub-acutely active; post-operative biliary tract infections.* Even when the patient appears to be progressing in a fairly satisfactory fashion, in the presence of a known gall-bladder, duct or liver malfunction, it is advisable, systematically, to perform diagnostic trans-duodenal bile tract aspiration several times yearly. By this means, one can be at all times sure of the status of his patient and, should the aspirations indicate a recrudescence of disease, measures suitable to the affair at hand may be instituted before an acute crisis develops or previous to the time when gross pathologic anomalies have practically destroyed the ducts, the gall-bladder or the liver functionally.

As we have already mentioned, no patient upon whom cholecystectomy or cholecystostomy has been performed, should be discharged from the physician's care until biliary tract aspirations indicate absence of infection and the presence of permanent healing. Even after such proof has been secured, it would seem advisable (in view

of what the surgeons have taught us to expect in regard to anatomic alterations following operations upon the gall bladder) to insist that every patient operated on have diagnostic bile duct aspiration twice yearly post-operatively. MacCarty's recent study (yet unpublished) upon hepatitis in association with the various forms of cholelithiasis certainly indicate that if serious damage to duct and liver are to be prevented, we must have a means at our command for the clinical recognition that such disease exists, together with a method of therapy which can be actively directed against the known seat of disease.

REPORT OF A CASE OF CARDIOSPASM WITH ENORMOUS DILATATION OF THE ESOPHAGUS*

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The first cases of so-called idiopathic dilatation of the esophagus were collected by Von Ziemssen and Zenker in 1878. In 1904 Mikulitz reported one hundred cases collected from the literature. Since that time Sippi, Lerche, and Erdman in this country have reported a number of cases, and in 1908 H. S. Plummer of Rochester wrote a very excellent paper on the subject and reported forty cases of cardiospasm which he had treated up to that date. Many more cases could be reported at this time, but the diagnostic methods and the treatment have not changed materially since that time. The interest in the subject lies in the fact that cardiospasm is a condition which the average practitioner seldom sees.

The following is a brief summary of Plummer's work on the subject. The disease has been attributed first, to cardiospasm; second, to atony of the esophagus; third, to simultaneous presence of cardiospasm and paralysis of the vagus; fourth, to congenital disposition; fifth, to primary esophagitis, and sixth, to kinking of the hiatus esophagi. In all probability the atony seldom occurs. Cardiospasm may be associated with gross lesions as ulcer or cancer.

The cardia is normally closed and the food is pushed through by the peristalsis of the esophagus. After dilatation takes place the bolus of

food is carried forward in the usual manner as far as the upper end of the dilatation. At this point the peristaltic contraction ring ceases to exert any direct force on the bolus but sweeps around it. The food is then propelled by gravity and increased pressure. In the development of cardiospasm three stages are recognized. In the first stage the peristaltic contraction is sufficient to force the food through the spastic cardia.

This stage is characterized by discomfort, pain, and a choking sensation. Second, the peristaltic force is insufficient and the food is immediately regurgitated. This may be due to the increased cardiospasm or decreased muscular power of the esophagus. At first the spasm is periodic, later continuous. At first, there is a hypertrophy of the muscles of the esophagus and later a stretching. Third, once the esophagus begins to give away the dilatation is rapid. This stage is characterized by retention of food and its regurgitation at irregular intervals after ingestion. The symptom complex is, therefore, first, cardiospasm without food regurgitation; second, cardiospasm with immediate regurgitation of food, and third, cardiospasm with dilated esophagus, retention, and irregular regurgitation. After dilatation has taken place the sac never completely empties and the amount of retention may vary from two to sixteen ounces and can be withdrawn twenty-four hours after fasting.

Some of the points in diagnosis are: food regurgitation from the esophagus and not the stomach; the existence and character of the obstruction at the cardia; the presence or absence of esophageal dilatation, its shape and size; radiographing of the bismuth in the dilating esophagus; determination of the size of the dilatation by means of a rubber balloon distended within the esophagus; and the esophagoscopic examination.

One of the suggestive symptoms is failure to pass the stomach tube, although an olive passes readily into the cardia. Immediate regurgitation of undigested food upon passing the stomach tube is suggestive of dilatation of the esophagus. One cannot always make a diagnosis by the use of olives because if an olive strikes the cardia at its center it passes very readily through the cardia without offering much resistance. This will distinguish it from an organic stricture.

*Read before Annual Assembly Tri-State District Medical Society, Waterloo, Iowa, October 4-7, 1920.

The old style of treatment such as the use of fluids, non-irritating diet, effervescent drinks, bromides, frequent passage of sounds is very ineffective. A few cases have been operated upon and the cardia dilated through the gastrostomy wound. This is effective but not necessary. The

necessary for him to leave the table, throw his arms back, grasp something firmly, take a drink of water, throw his head back and thus, with enormous pressure, force the food into his stomach. It would shoot in with a very audible whistling sound.

The esophagus, however, was never entirely emptied and every morning he would throw out a



Fig. 1. Lat. view of dilated esophagus.

Fig. 2. Anterior-posterior view showing stricture.

Fig. 3. Showing 6 hr. meal in Cecum and transverse colon; the stomach and lower end of the esophagus filled with barium.

development of the apparatus for stretching the cardiospasm by means of hydrostatic pressure in a strong, silk bag has made the more radical treatment unnecessary. With such an apparatus it is possible to stretch the cardia sufficiently to paralyze the sphincter but not enough to tear the opening itself. If pressure of 500 mm. will not accomplish this, pain is disregarded as a guide and dilatation is carried out, gradually increasing the size. In the cases treated in this way the most gratifying results are reported.

The case which I wish to report is that of T. P. W., age 66, married farmer; present weight 142; weight several years ago 172; family history negative. He gave a history of having had trouble in swallowing since he was fourteen years of age. He said that food would stay in his esophagus several hours and then he would have to spit it out. He gave no history of any trouble before the age of fourteen, except that he was subject to croup. He was taken to one doctor who recommended smoking and this did him some good. A year later he was taken to another doctor who recommended an operation, but his people were poor, and did not favor such a procedure. This continued without treatment for forty years. Seven years ago, he had the flu, and from that time he grew steadily worse in regard to his swallowing. It required enormous pressure to force food into the stomach. He found that he could eat practically a whole meal before swallowing it. It would then be

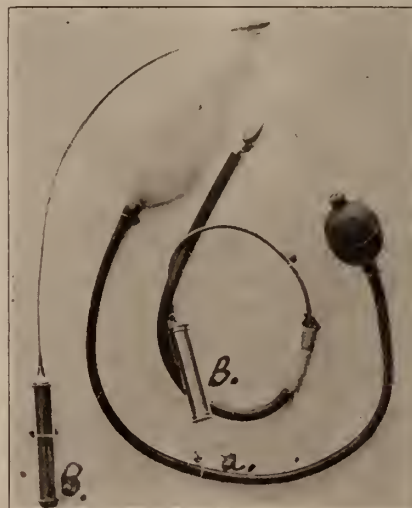


Fig. 4. Simple apparatus for mild dilatations of the esophagus. (a) Bulb pressure apparatus. (b) Olivary Bougies.

large amount of food that had been taken the night before. The patient's appetite was good; he belched practically not at all, but was continually troubled with a large amount of gas which passed out through the bowel. He had no particular distress after eating; he never vomited, but simply regurgitated the food out of the esophagus, which he was unable to swallow. His bowels were regular; he had a slight

brassy cough; no pain; was somewhat nervous and ill-nourished. His general physical condition was fair for a man of his age.

An ex-ray examination was made. Upon giving him a bismuth meal it was found that no food passed into his stomach; that the esophagus was enormously dilated, was narrowed down to a small stricture in the region of the cardia about one inch and a half long and one-eighth of an inch wide. On the first examination we were unable to fill the stomach, but upon attempting to pass the stomach tube, a large amount of undigested food was regurgitated from the esophagus. Considerably over a quart of residue was thrown out at this attempt. We were also unable to pass the olivary bougie as it seemed to stick in the sac.

The patient was given a spool of silk thread with two BB shot attached and instructed to swallow the shot and keep the spool of silk in his pocket. After several days the thread had passed down into the intestine far enough so that it could not be pulled back. With perforated olive bougies we followed the silk thread down through the stricture and by increasing the size of the bougies, gradually stretched the stricture. We found, however, that the stricture would close down immediately after stretching so the patient was given anti-spasmodics for a few days and this treatment continued. Later it was possible to pass the stomach tube along down the thread and into the stomach. After this had been accomplished he was fed through the stomach tube a large amount of milk and cream and given only very soft foods and liquids. By this means his general physical condition was improved greatly. Later we were able to pass a rubber bag with a silk covering into the narrowing. With ordinary bulb pressure we stretched the stricture enough to give him considerable relief. These stretchings were continued and at the same time, the esophagus was kept empty and food was introduced into the stomach by means of the stomach tube. The patient's condition improved rapidly and the esophagus regained its tone somewhat. The analysis of the stomach contents showed a considerably lowered acidity. He was given a little dilute hydrochloric acid to assist in the digestion of his food.

An x-ray examination several months after treatment showed very normal function of the gastrointestinal tract. The six hour breakfast had advanced to the cecum; there was no residue in the esophagus or the stomach. Examination under the fluoroscope showed still some delay in the food passing from the esophagus into the stomach. He was able to swallow food with very little difficulty, his weight increased, he never regurgitated food, he belched freely, and was thereby relieved of the distressing bowel symptoms.

The bulb pressure apparatus is one that can be made by anybody and will give fairly good results from the start if the dilatation is repeated often. However, by means of hydrostatic dilator which we later obtained and used on this case,

it was possible to accomplish more with one or two dilatations than we accomplished with many treatments of the milder type. In the first treatment with the hydrostatic apparatus the pressure is ordinarily run up to 3 or 4 on the gauge. In this case pressure up to twelve was used. With the second treatment an attempt is made to increase this pressure enough to accomplish the desired results. Even with this apparatus it is sometimes necessary to repeat these dilatations a good many times, and if a recurrence occurs within a year or two the spasm can usually be overcome with one or two treatments.

The second case which I wish to report is a case of a young woman, aged 23 years, who was referred to me by a nose and throat man whom she had consulted with the idea that she had throat trouble. This young woman gave a history of having had difficulty in swallowing for the past two years. She first noticed that food would stick in her throat at times and she could often feel the food as it passed down through the esophagus. A year ago she became much worse. She consulted several physicians but obtained no relief. Since that time she has been regurgitating small portions of food and liquid immediately after swallowing.

When first examined her trouble had become so severe that she was suffering from a very distressing thirst which she was unable to relieve because of her inability to swallow water. She was in good physical condition and showed no evidence of malnutrition. Under the fluoroscope the barium meal seemed to lag in the esophagus. Liquids went down fairly easily. Twenty minutes after giving her a motor meal, the esophagus was still filled with barium and slightly dilated just above the cardia. The stomach tube failed to pass and upon withdrawing it from the esophagus, some of the meal was regurgitated. The olivary bougies passed with only slight resistance at the cardia, which slight resistance was about 14 centimeters down from the teeth. The hydrostatic dilating bag was passed but upon filling the bag it was found difficult to hold the dilator in proper position as the inflation seemed to press the bag into the stomach. It has been found that in these early cases where the esophagus is not much dilated, it is necessary to hold the dilating instrument very firmly against the teeth and not allow it to slip down if one is to accomplish the desired result. Three stretchings were used in the case of this woman. The pressure was put up to 12 in the first, fifteen in the second, and twenty in the third, as is shown on the pressure gauge. Since the first stretching she has had no difficulty in swallowing and aside from the little discomfort which she had about 48 hours after the treatment, she has had complete relief from the symptoms.

In conclusion I will say that if one is not able to obtain a hydrostatic dilator, the bulb pres-

sure apparatus can be made with just a blood pressure bulb, a stomach tube, a galvanized telephone wire, and an olivary bougie. The olive is soldered onto the end of the wire. The wire is placed in the lumen of the stomach tube to act as a stilet, and over the olive and attached to the lower end of the stomach tube is placed the rubber balloon and on the outside of this there is a silk bag or an animal membrane to keep it in shape. This is then pushed into the contracted cardia and as much pressure as the patient can bear is used, repeating this as often as necessary to accomplish results.

Plummer, H. S.: Cardio-spasm. Report of 40 cases, J. A. M. A., 1908, Vol. L., No. 7.

Further progress in Treatment of Chronic Cardio-spasm. G. Gottstein. Archive Five.

Klinische Chirurgie, Berlin, LXXXVII, No. 3, p. 497.

Wilson, Hugh: Personal Communications.

THE STANDARDIZATION OF METHODS OF TREATMENT IN ORTHOPEDIC SURGERY AND IN INDUSTRIAL SURGERY OF THE EXTREM- ITIES AND SPINAL COLUMN.*

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At a conference with the Accident Insurance Commission of a great state held during the war it developed that the Board was faced with the following somewhat embarrassing situation.

Their records showed that with surprising consistency cases presenting more or less typical lesions, such as Colles' and Pott's fractures, varied in the length of time required for return of wage earning function and that this difference in time of recovery depended chiefly upon the surgeon to whom the Board referred the case, rather than upon the mental and physical condition of the patient. The situation was embarrassing because these two groups had approximately the same standing in the community as to professional skill and medical ethics. The Board selected only surgeons of good reputation and seemingly approximately equal ability, but these facts of utmost importance to the Board remained indisputable.

The explanation may be found in the standardization of methods and in the unrelenting effort for the earliest possible return of function

in the one group, and in the other in the more or less haphazard methods and in the lethargy in relation to return of function engendered by complacent satisfaction in the complete or partial immediate correction of the main lesion.

We have ventured to link together in our title Industrial and Orthopedic Surgery for the reason that in both the importance of regaining the largest amount of function in the shortest possible time is paramount. One may say that some measure of success in restoring function in chronic and congenitally deforming conditions was almost the only excuse for the existence of the specialty or Orthopedic Surgery in its early days. This experience may possibly be valuable to Industrial Surgery, whose chief aim must be to prevent deformity and restore wage earning capacity. Moreover, as we watch the trend of surgery we find in the large centers a seemingly increasing tendency for the general abdominal surgeon to refer acute as well as chronic lesions of the extremities and spinal column to surgeons whose interest has led them to devote special attention to these lesions.

The American Orthopedic Association at its last meeting added to its old definition of the scope of the specialty the phrase, "In general, the surgery of the extremities and spinal column."

We are conscious, very conscious, of our limitations. No one can be more aware of the fact that many of us calling ourselves Orthopedic Surgeons are fitted to undertake only a few of the problems included in surgery of the extremities and spinal column. The surgery of the war, and industrial surgery as well, have shown how really few so-called general surgeons are, on their part, efficient "Menders of the Maimed," as Arthur Keith has called Hunter and Hilton and Thomas, and the early American school of Orthopedic Surgeons. The specialty is trying to "hitch its wagon to a star" and insist that no matter what the limitations of its honored grandfathers or its present manhood may be, the youth who knocks at its doors shall have had a thorough training and been proved proficient in general surgery, and I hope internal medicine as well, before he is welcomed into membership of the National association.

The demand for this type of surgery exists. How shall we supply it? By getting the demand

*Read before the Annual Assembly of the Tri-State District Medical Association held at Waterloo, Iowa, Oct. 4-7, 1920.

more generally recognized, by stimulating interest in this type of surgery, and by standardizing methods of treatment.

This standardization must come first of all by thorough and entirely impartial study of our end results, not of months, but of years. The standards must constantly change, must advance, by research, by perfecting operative technique, by ingenuity in devising apparatus, and by ascertaining the value of various physiotherapeutic measures, but we can at least start to honestly study our end results now, enormously helped by the unfortunate plentitude of cases with which the war has furnished us at home and abroad.

We must pause a moment here to pay tribute of thanks to Dr. E. A. Codman, to whom more than to any other surgeon the thanks of America are due for inflexibly maintaining that the measure of success of surgery is not the recovery of the patient from the surgical operation, but the end result of that operation in terms of increased functional capacity of the patient. "Man makes the wound, but God heals it," and we might well add, benignly accepts the help of His servants in restoring function while healing is taking place and often for a long time afterwards. The converse is true. Man may mar Nature's cure to a distressing extent, not by intent, but by ignorance and unsound therapeutic principles.

We shall attempt to outline certain methods which seem to have stood the test of time and war and the fierce light of their end results. The outline must perforce be brief and indicative only, and can hardly fail to be flavored with personal conviction. Though we may bring you nothing new, we shall try to make a just appraisal and pay tribute to Cæsar when tribute is due.

Let us first review the methods of treatment in a few of the conditions which have for years been considered as belonging almost exclusively to the domain of Orthopedic Surgery.

1. *Tuberculosis of the Bones and Joints.* The standardized methods of treatment of the systemic disease are the same in adults and children. Rest, followed by as much function returning exercise as is safe, outdoor air, heliotherapy in scientifically applied dosage, these are the irreducible minima. No one who has visited Rollier's clinic on the Alp at Leysin or who has watched cases in this country treated by his

methods can fail to be impressed by the greatly enhanced general high health with which the sun's rays provide the patient, enabling him to combat and often to overcome the systemic disease.

When we approach the problem of the treatment of the local lesion we must apply methods which are often very different in the lesions of children and adults. Thus in a general way, with growing bone we may re-echo the repeated dictum of Kirrmisson as he patiently watches and protects the suppurating joints of the too often neglected Paris children in his hospital wards, "Jamais résection, jamais résection," but once we have made the positive diagnosis of tumor albus in an adult, whose full growth has occurred, our next step is to set the day for excision, and unless the joint is very acute as a result of trauma or too great use, the earlier we set the day the more perfect weight bearing and useful limb shall we secure.

In children the standard method of treatment of tuberculous joints is rest and fixation without open operation.

In adults we may say in general that the standard method is excision, striving and expecting to overcome the disease by depriving the joint of motion and, therefore, of the type of bony tissue in which the tubercule bacillus is most prone to grow.

In the hip joint in children there are still polemics as to whether fixation alone, with symptomless weight bearing allowed, or fixation plus traction, and without direct weight bearing, is likely to give the best end results. The one party maintains with Lorenz that a firmly ankylosed hip, in good weight-bearing position, is the safest and most useful end result in tuberculosis of the hip, and that simple fixation with weight bearing is the best way to obtain it. The other group maintains with Bradford that we may look with hope for the restoration of a range of motion which is without danger. Our personal opinion is that the social condition of the patient and hospital facilities largely dictate the method of choice. If he can receive little attention, a plaster spica is perhaps safest. If he can have careful home or hospital care, with intelligent attention to his traction, preferably in an abduction hip splint, the arguments for its use, based on the

morbid anatomy of the lesion, would seem to bear most weight.

I believe I should place my child with acute hip disease in bed, with traction in line of deformity, should encourage painless active motion once or twice a day, and should allow weight bearing in a protective abduction splint only when I believed the disease was entirely quiescent, and perhaps only when I believed it at least temporarily overcome.

I have dwelt on hip disease in children because we see most unsatisfactory results in most cases under ambulatory treatment of all sorts.

The treatment of adult tuberculosis of the knee, probably the most frequent seat of the disease is, in our opinion, definitely standardized. Excision, sometimes amounting to hardly more than erosion, by curved or mortised or by simple straight, flat resection of the joint surfaces, and the quick and necessarily partial removal of only gross pathologic tissue, is to be done as soon as the diagnosis is made and any acute exacerbation of the disease has been quieted down by rest and fixation.

We are convinced by a comparative study of cases that some form of internal fixation of the freshened bone surfaces in closest apposition greatly hastens bony union. We have used with success metal plates to be subsequently removed, kangaroo tendon in a bundle knot, wire nails, boiled beef bone, plates and screws, and at present are employing decussating pegs of round boiled beef bone driven in through drill holes extending from the outer condyle of the femur to the inner condyle of the tibia and vice versa. We expect fairly solid weight bearing union in three months; we have had it repeatedly in two, and have known it to occur in several instances in one. We have never known an adult tuberculous knee to permanently recover useful function without excision or erosion.

Spine. We consider the routine employment of homogenous bone grafts or extensive ankylosing operations on the spine in tubercular caries in young children is still sub-judice. We believe that recumbency in a corrective position on a Bradford frame can still show as permanently good results as any ankylosing operation and without too great sacrifice of time. To be safe we must stiffen by operation larger areas of the

spine than Nature does, and the story of possible secondary back and pelvic joint strain in later life has not been written.

In adults the boiled beef bone graft advocated by Gallie¹ and employed in the largest series of cases by Brown seems to bring about as firm an ankylosis in as short a time and to be tolerated as well as the more mutilating homogenous grafts. This should be combined with a fusion operation after Hibbs' method.

Rickets. When we see a bow-legged or knock-kneed child our first thought is braces or operation, but we must dismiss the thought until we are able to answer two questions: 1. Is the nutritional disease quiescent? 2. Is the deformity increasing or diminishing? Surprisingly bad cases of both deformities correct themselves if the underlying disease is controlled. All light cases may be said to do so. If corrective operation is decided upon shall we do an open osteotomy, shall we break the bones without the skin (if we are lucky) in one of the many efficient forms of osteoclases, or shall we with strong hands strive to correct the deformity by separating the epiphyses after the method of Codivilla? There may be methods of choice in individual cases, but the large series of successful end results of the osteoclases of Blanchard² and the epiphyseal slidings of Codivilla should make us slow to condemn these rather rough—one may say almost brutal—but quite safe methods.

Adolescent rickets, if there is such a disease, is another story. The so-called epiphyseal separation of the hip with coxa vara in fat boys and girls with small genitalia occur usually only as a symptom of this disease and are traumatic only in the sense that the final complete separation may occur as a direct result of very slight injuries. They may be usually greatly improved and often completely corrected by manipulation under full anesthesia and fixation in full abduction. Preliminary bed traction is often helpful in old or extreme cases.

Scoliosis. What shall we say is the standard method of treatment of lateral curvature of the spine?

There is no standard method, nor are we able in many cases to secure anything like complete correction or even prevent the development of deformity under our very eyes by any method of

treatment, exaggerated and hopeful claims to the contrary.

We must, first of all, see to it that we follow Ambrose Paré and strive to do no harm. Scoliosis is not faulty statics alone, else would every short leg in hip disease or in infantile surely develop it. They do not. It may be faulty statics, congenital or acquired, plus bone disease akin to rickets or osteomalacia, or it may be, we believe, bone disease alone. We seem to arrest or even correct many slight early cases by exercise, by light corrective braces, perhaps by forcible plaster jackets, but perchance the underlying bone disease corrects itself and Nature does in reality what we seem to do. In severe progressive curvatures it would seem rational to impose recumbency plus medication, plus hyperemic physiotherapy, plus corrective appliances, but let us first remove the force of deforming gravity, always at work in the erect position.

Congenital Deformities. We shall mention only two, congenital dislocation of the hip and talipes equino varus or club foot.

Lorenz and others have claimed in young children 80 to 90 per cent. of anatomically perfect reductions in congenital dislocations of the hip by the bloodless method. This per cent. is probably in the light of the end results we are now studying considerably too high. Moreover, secondary changes in the contour of the joint surfaces which follow repositions and later impair joint function are more common than we have supposed. On the other hand, reduction by open operation has left far too many stiff hips in its train, unless we find that Galloway's recently reported large percentage of successes can be duplicated by other surgeons. Bloodless reduction is still the method of choice, with after-care a most important element in the ultimate correction. Up to four years, reposition is usually comparatively easy, but retention by no means sure. After seven, every successful case should be reported and medical literature will not be encumbered by these reports.

When should we begin to correct a *congenital club foot*? The day we discover it. First, by daily manipulation and adhesive plaster or soft dressing retention in infants, and plaster of Paris dressings in later childhood, until once correction has been obtained and weight bearing in slight valgus can aid in maintaining the correction.

In resistant cases of over four years, which have not been amenable to correction by repeated manipulations and retention in the three-part plaster of Fiske, Ober's operation, which consists of an open subperiosteal freeing of all restricting ligaments, deltoid, calcaneo-scapoid, and plantar, is usually successful and non-mutilating. The twist of the os calcis must be corrected as an important base of the deformity, and if the fore foot still persists in turning in, the careful osteotomies and osteotomies of the tarsus and metatarsus after Hoke's³ methods are efficient. Bone operations in general are not standard methods of treatment in childhood. The immediate correction is often excellent, the end result as to future growth and progressive deformity often irremediably bad. Talipes equino varus tends to recur for years and our manipulative or operative correction must be often retained by braces or by specially corrective shoe balancing.

Poliomyelitis. It is almost futile to attempt to outline standard methods of treatment in poliomyelitis. We all know that in the early stages, for six months, probably a year, prevention of deformity is the only surgical treatment and is of utmost importance. Unexpectedly complete recovery often occurs. We also know that tendon transplantation, supplemented by tenotomies if contractures have been allowed to occur, is our next procedure. The groups which may be transplanted with more or less standard results are becoming known and their number is diminishing with the knowledge. The intrasheath method of Biesalski and Mayer⁴ represents theoretically the most perfect technique, but we are not yet convinced of its habitual necessity in light of end results. Training, unremitting and continuous, in the co-ordination of the remaining musculature is the last step, this muscle training, if necessary, aided by operative stabilization of joints and ambulation with the least possible brace support the end sought and often obtainable.

Foot Strain and Faulty Weight Bearing. Can we standardize the treatment of this common and crippling condition affecting the laboring and leisure classes? I believe we may very nearly do so, if we do not become inflexible. If we attempt to bring about a cure by one type of apparatus we shall fail. If we accept as our diagnostic sign the height of the arch of the foot we shall be deceived.

The most efficient feet are often perfectly flat in standing. If we recognize that strained feet, not *flat feet* necessarily, are almost always induced by imperfect or inadequate muscle action we shall succeed in standardizing our treatment and in relieving our patients.

A great orthopedic surgeon in England never uses an arch-correcting plate; a great orthopedic surgeon in New York never uses anything else, but they both realize that foot strain and accessory leg and back strains come from inadequate support of the arches of the foot by muscle action designed to protect them. The flexibility of the longitudinal arch and proper weight bearing lines are largely controlled by the pulls exerted by the lower leg muscles and the rotators of the thigh, the flexor longus hallucis, the posterior tibial and anterior tibial, as adductors and protectors, the peroneals as abductors, balancers, and if too strong as the producers of pronation and foot strain. The main ligament which prevents the arch from falling is the calcaneo-scapoid. Pronation of the foot, the precursor of joint strain and flat foot, occurs at the calcaneo-astragaloid joint, not at the mediatarsal joint, as the textbooks say. The sustentaculum tali must be propped up. Lower leg muscles protect the calcaneo-scapoid ligament and control the motion at the calcaneo astragaloid joint. The adductors should pull *in* five pounds for every four pounds that the abductors pull *out*. This is normal balance. If the balance is not normal, potential or actual foot strain and faulty weight bearing exist. If abnormal balance exists we must restore the normal—first, by removing the common inducers of the abnormal—commonly shoes made on faulty lasts, by substituting non-deforming and often flexible shanked shoes. Sometimes this is not sufficient, and if the patient is to be kept at work and ambulatory, we must give badly strained structures rest. This we may do by means of Thomas heels, adhesive plaster strapping, or by supporting and correcting foot plates, but if our cure is to be permanent we must permanently restore normal balance to the muscles. They will often restore the balance themselves if given a chance. If not, we must correct faulty body posture, teach them proper methods of walking, exercise the adductor muscles at the expense of the abductors. Restoration of normal balance is the standard treatment.

In anterior arch troubles and painful calluses the problem is the same—first, lift the patient off the painful metatarsal heads and mould the arch back by lateral pressure and supporting pads or plates, then teach the patient to lift his own metatarsal heads off the ground by the development of the long flexors of the toes and the intrinsic muscles of the foot. Rigid feet must be usually dealt with by manipulation or open operation, and are rarely completely relieved.

Osteomyelitis. One of the direct results of the war has been the standardization of the treatment of infected bone. The principle is disinfection. Many disinfectants have been used. We believe that Dakin's solution and Carrel's meticulous technique have shown better results than any others, and what is significant, these results have been repeated by other surgeons who have omitted no essentials of the method. Macroscopically infected bone must be surgically removed so as to leave a crater with no overhanging edges. When the bacterial count remains practically zero most of these craters may be filled with muscle or skin flaps and a secondary skin closure attempted, with excellent hope of success.

Curettage of the bone is no longer standard treatment, and the measure of its success we know, by the almost certain recurrences of trouble which have rewarded our formerly routine treatment. The surgeon who uses a curette to clean bone except in very rare instances should not today be considered a bone surgeon. Acute osteomyelitis means first early recognition and early complete drainage. It is quite possible, especially in children, to be too radical and to infect by operation healthy medulla.

Joint Infections. Although the war furnished an unfortunate plethora of infected joints, it contributed less than is generally supposed to the available knowledge of the treatment of joint infections. In one important particular it may be said to have revolutionized treatment. Willem's has apparently demonstrated that early *voluntary* joint motion, even in the presence of open wounds, provides the most adequate drainage and preserves the greatest amount of function. The war also disseminated the knowledge, previously gained by those whose experience had been large, that the synovial membrane, like the peritoneum, is extremely resistant to infection. Death frequently results from an unintelligently treated

and badly infected synovia, as it does in general peritonitis, but with a little help, after a thorough lavage, a synovial cavity will usually take care of a mild infection better without a foreign body drain than with one.

Unless there is frank pus in the joint cavity we believe most joint infections may be overcome by making incisions of moderate length through the synovia, evacuating the fluid, passing a soft rubber catheter into the recesses of the joint, and washing out for ten minutes (as Cotton says, "ten minutes by the clock") with normal saline, weak bichloride solution, or some other mild antiseptic. Following this the synovia should be closed tight, and will rarely need to be reopened. This treatment is successful even in cases of marked distention showing a febrile reaction. It is, of course, most applicable to the knee, which is the joint most commonly infected. This method is especially valuable in the fulminating gonococcal infections.

If we have misjudged the severity or extent of our infection we must drain, and drain thoroughly. Until Willems²⁵ work we had supposed that this drainage could be best secured by large incisions and fixation. This fixation and drainage resulted either in a completely ankylosed joint or in a joint with so few degrees of motion that this motion was an actual menace. We now know that with comparatively small incisions and voluntary (never passive) motion, begun almost as soon as the patient has recovered from the anesthetic, we may secure better drainage, a freer lymph flow, and in many instances preserve a useful range of motion.

In spite of favorable reports, our experience with excision of septic joints does not lead us to believe that drainage is usually greatly bettered by the procedure. The end results have been certainly very distressing in many instances.

In joints upon which clean operations for internal derangements have been performed we believe that early voluntary motion, as soon as the stitches are out, perhaps before, will become a standard method of treatment. We have passed the day when moderate effusion should contraindicate this movement, providing the cause of the original effusion has been removed and the joint be protected from dangerous extremes and sudden strains.

Amputations. We have gained much knowl-

edge of amputations and our treatment has become for the time being fairly well standardized.

Let us pause here to speak with enthusiasm of the functional end result of a properly performed Syme's amputation, especially since it seems to be discredited in many quarters.

We should choose our sites with the prostheses always in mind. We should strive to prevent painful nerve bulbs by careful shortening of the nerve trunks after preliminary injection of them with 90 per cent. alcohol (according to the Huber technique). We should strive to prevent proliferative changes on the bone stump by removal of cuffs of periosteum and endosteum proximal to point of section in *clean cases*. We should apply traction to the skin above our flaps on the operating table and should maintain it until cicatrization has taken place.

In lower limb amputation we should provide a provisional prosthesis, usually in the form of a plaster pylon, and begin weight bearing as soon as our wounds are closed, sometimes in infected stumps even in the presence of granulating surfaces. The mental condition of the patient is enormously benefited thereby and the stump shrinking and hardening is hastened. The date when the final definitive limb may be supplied is brought nearer. This matter of early weight bearing is of great importance. It makes use of the initial intense desire of the man to regain activity in the upright position. This desire loses its intensity all too quickly in a comfortable wheel chair, pillowed by pity. It brings a return of wage earning capacity much earlier. Six months may often be saved. There are many thousand accident amputations in this country in a year. Saving six months' time on these thousands would mean the labor of a man saved to this country for half as many thousand years.

Sprains. There would seem to us to be three rules to be followed in standardizing the treatment of sprains.

1. Be sure the sprain is not a fracture or a sprain-fracture. If one exists we must prevent exuberant callus by more complete immobilization and less complete function.

2. Determine the exact anatomy of the lesion by ascertaining the method of its production and its mechanical necessities.

3. Protect the torn ligament or ligaments, usually by adhesive plaster, and allow immediate

function, the completeness of which is directly proportionate to the completeness of the protection.

To illustrate: the ordinary sprained ankle is often associated with a crack in the fibula or a pull off of a bit of external malleolus, but if no bone lesion is shown in the x-ray we are dealing with a tear of the external lateral ligament produced by a sudden forcible turning inward of the foot. This ligament, suddenly called upon to support the whole weight of the body, ruptures. If the foot is abducted in order to bring the fresh edges of the torn ligament into apposition, and retained in this position by a stirrup strapping of adhesive plaster running at least half way up the leg, the patient may be allowed to immediately bear weight. The massage of function reduces the swelling, and the healing of the ligament is in no way interfered with, and no painful stiffness results. With weekly strappings in four weeks almost all, and in six weeks all, sprained ankles should be well, and function during recovery has been made possible.

Dislocations. The standard of treatment is complete reduction and incomplete fixation. I do not mean that it is unnecessary to immobilize the joint immediately after reduction, in order to prevent recurrence and in order to allow the torn capsule to heal, but that at the earliest possible moment, surely within a week, slight voluntary movement by the patient should be encouraged at least once a day, the retentive apparatus being removed under observation. The range of non-irritating motion should be increased from day to day. Far too many dislocations develop an obstinate stiffness from too cautious and prolonged immobilization. Safety first, but safety of function is gained by avoiding the danger of too long retention.

FRACTURES

Fractures of the Spine. We shall divide these into those with definite symptoms of cord pressure and those with very slight or almost absent symptoms.

1. If there are definite symptoms of cord pressure less than those of complete severance, and the x-ray shows probable pressure from bony fragments, operation should be undertaken at the earliest moment the condition of the patient allows. Unfortunately these clear-cut indications are usually not present and the debate between

operative and fixative expectant treatment is on. Statistical literature helps us little, and we can only say that we believe when the arguments for and against operative procedures are nearly even, we should incline to non-operative treatment. We should expect better averages of partial or complete recovery.

Of great importance are those fractures of the spine of the second class with very slight or absent cord pressure symptoms. Compression fractures with little or no kyphotic deformity and no pressure symptoms are comparatively common. X-ray alone confirms our diagnosis. Treatment by immobilization in recumbency should be immediate, complete, and prolonged. It is quite possible that the standard treatment will come to be early ankylosing operations on the spine by means of bone grafts or other fixative operative procedures. The time of prudent immobilization by apparatus may probably thereby be shortened and full wage earning capacity hastened. If recumbent immobilization can be instituted very early these cases may be expected to fully recover without operation, but we must maintain this protective immobilization for several months, perhaps six, if we are to avoid the subsequent irritative bony overgrowth changes (Verneuil's disease) which frequently cause increasing cord and nerve root pressure symptoms long after the original lesion is received. Transverse myelitis has been known to occur years after the fracture from this slowly occurring hypertrophic change.

Fractures of unimportant spinal elements, e. g., transverse and spinous processes are frequently considered more serious than their immediate or remote symptoms justify, and are likely to receive too heavy compensation.

Fracture of the Clavicle. Fortunately little lack of function may be expected even if a considerable degree of deformity results. In an adult it is extremely difficult, if not impossible, to maintain good alignment by any of the classical methods, Velpeau bandage, Sayre strapping, etc. The shoulder will not stay back or up. The best and simplest method of maintaining alignment is to put the patient to bed with a pillow between the shoulders and the affected shoulder dropped back and held up. Fair to good alignment may also be obtained by at least one ambulatory method. This is the old-fashioned clavicular cross made of wood or plaster, the cross-bar being

wide enough to prevent the figure of eight bandage turns, which pass over and pull back and up both shoulders, from cutting into the axilla. This dressing is comfortable when properly applied and is efficient. We know of no other method of ambulatory treatment which is as effective or as well borne or as easy to apply.

Fractures of the Shoulder Joint. If the humeral head is dislocated and comminuted, the problem is at best difficult. The head must be replaced and usually only by open operation, as perfect apposition of the fragments as possible being gained by suture. Then the shaft is brought in alignment in whatever position of the arm is proved to be best for the individual case. Without dislocation, but with comminution, there is a tendency at present to excise one or all of the fragments. We believe this tendency is wrong, even if good apposition of fragments cannot be obtained. Excised shoulders are usually extremely handicapped ones and voluntary abduction is usually impossible. Surprisingly good function results from these severe comminutions, impossible to accurately replace without open operation, if abduction is maintained and too prolonged immobilization avoided.

The danger of ankylosis without removal of fragments is a real one, but if the arm be fixed in 70 degrees of abduction in the neutral position, i. e., half way between the mesial and horizontal planes of the body, and slightly rotated outward, a stiff shoulder is extremely useful and vastly better than an excised one.

In fractures of the upper portion of the humerus below the greater tuberosity, the upper fragment will be pulled upwards and usually rotated by the pull of the supraspinatus, infraspinatus and teres minor, while the pull of the deltoid and especially the pectorals must be reckoned with in the lower fragment. The short upper fragment must be followed by the long lower shaft fragment, and this as a routine (not without exceptions) means fixing the arm in abduction.

Shaft of the Humerus. We need perhaps here only remind you of the common feature of delayed union, and state our conviction that the very frequently employed internal angular splint, even with coaptations, is a mechanically imperfect method of fixation for these fractures. It fixes the lower fragment well and the upper frag-

ment badly, and the leverage at the site of the fracture is great.

The Jones humerus traction splint fulfills the requirements and its principles of axillary, or rather upper chest wall, counter traction and complete fixation of the upper fragment should be adhered to, whether this splint or whether plaster of Paris is used.

If the whole side of the chest be utilized to retain these fractures, respiratory movements make the immobilization imperfect and a cough or sneeze may disturb alignment.

Fractures of the Elbow Joint. We should accept as standard treatment in fractures of the elbow joint reduction and fixation in acute flexion, which in itself often most perfectly accomplishes reduction.

There is one all-important exception, which is, of course, fractures of the olecranon in which fixation in extension brings the fragments in closest apposition. There are certain other occasional exceptions to fixation in acute flexion which have been taken, but do not seem to us important, since flexion is the functional motion most often lost and if Sir Robert Jones' dictum of the recovery of motion is followed, almost complete range of motion can usually be conserved. This dictum is to allow during convalescence gradual broadening of the angle in which the elbow is fixed, the rate of increase always gauged by the ability of the patient to voluntarily flex the elbow to the position of acute flexion in which it was first fixed.

Fractures of Both Bones of the Forearm. These are hard fractures to hold and if non-union occurs they yield the poorest end results from bone grafting. They may be best reduced by traction and moulding, and the alignment best maintained by fixation in a plaster running well above the elbow and below the wrist, holding the forearm extended and almost fully supinated. By this method the two bones are held well apart, and the danger of synostosis is least.

Colles' Fracture. We surely do not need to emphasize the supreme importance of breaking up the impaction in a Colles fracture at the wrist and the reestablishment of the normal difference in levels of the styloid processes. We believe, however, that most Colles' fractures are not simply impactions, but rotations of the lower radial fragment as well, and that this rotation

is frequently not corrected, or at any rate the correction is not maintained by the two side splints with ulnar deviation of the hand which have been considered efficient. Cotton⁶ and Loder have recently pointed out the persistence of this rotation and the impairment of perfect function which may result therefrom. We believe that their initial fixation in plaster with the wrist in palmar flexion and the hand in extreme ulnar deviation and rotated into pronation should be accepted as standard. We realize that this is the worst possible position for eventual function, but as soon as consolidation has begun this position may be gradually changed with little danger of slipping. The necessity of early motion of the fingers has been too well stressed to need emphasis.

Carpal Fractures. A word about carpal fractures and dislocations may be said. Reductions of dislocations of the semilunar, to be recognized only in lateral x-rays, have been reported and should be attempted. We have failed in a comparatively recent one, and excision of the bone gave a useful but not perfect wrist.

The more common fractures of the scaphoid rarely if ever unite and function is usually improved and pain lessened by removal of one of the fragments, the smaller as a rule. It should be explained to the patient that a more useful wrist may be expected, but not a perfect wrist. In doubtful cases both the injured and the well wrist should be radiographed, because divided scaphoids are one of the well known carpal abnormalities.

Fractures of the Pelvis. The standard treatment of fractures of the pelvis is recumbency and tight swaths or webbing belts, sometimes plaster spicas. These alarming fractures usually heal well and quickly and are less serious than is generally feared.

Fractures of the Hip Joint. We shall discuss only intracapsular fractures. In elderly people impacted fractures even with some deformity we often still leave impacted and fix lightly in spite of much advice to the contrary. In young healthy individuals the impaction should be broken up, and once loose, and in all originally loose intracapsular fractures, the only standard position for union is full abduction and slight inward rotation. We have at least passed beyond the stage of long side splint and Buck's extension. The necessities are close apposition

of the fragments and the restoration of the normal angle of the femoral neck with the shaft. Abduction and internal rotation fulfills these necessities, whether this be accomplished by Whitman's long plaster spica, often including the thigh on the unaffected side, or by Bradford's abduction Thomas splint, by double Thomas splints and Balkan frames, or the Jones abduction frame, matters little. Notwithstanding authoritative statements to the contrary, it is a difficult thing for a surgeon of more than average skill in the use of plaster of Paris to apply an extensive plaster spica to an elderly emaciated patient and make them comfortable or avoid the occurrence of pressure sores.

The results of the Maxwell-Ruth treatment in which no splints are used, but in which the element of lateral traction is added to direct traction on the limb, are most favorable. The resultant correcting force is traction in the line of the femoral neck, the purpose of which is to secure accurate alignment of fragments.

Fractures of the Upper Two-Thirds of the Femoral Shaft. Traction is here the standardized method of treatment, and if intelligently applied and actually obtained and maintained there is scant necessity for bone plates or open reduction. The Hodgen splint if applied as Hodgen prescribed will accomplish this. Weights and pulleys and overhead frames often succeed, but we believe that as the profession becomes familiar with the principles and advantages of integral traction and counter traction, the Thomas leg splint will be accepted as the standard. There are a few simple rules concerning the femoral ischial ring. The traction bands must always be kept tight, but simplicity and sound mechanics are more characteristic of this splint than of any other with which we are familiar. In the upper portions of the shaft a moderate degree of abduction and flexion are important because of the action of the glutei and iliopsoas on the upper fragment and the adductors on the lower. Lower down we must be sure to restore the important normal anterior bow of the femur and meet the outward rotation of the upper fragment by slight outward rotation of the foot.

Fracture of the Lower Third of the Femoral Shaft. We see no reason for not accepting as standard treatment for these fractures direct

traction on the femoral condyles by means of ice tongs as used by Beasley, and adopting Pearson's technique⁷ which has yielded such excellent results. Certain surgeons accept this method as standard for all fractures of the femur below the neck and have strong arguments to uphold them. Properly applied, the danger of bone infection is almost nil, pain is absent or no more than in other forms of traction, less weight is required, the knee may be kept exercised by Pearson's hinged appliance: only in this way is it almost always easy to correct the troublesome backward displacement of a short lower fragment.

Knee Joint Fractures. When T-fractures occur into the knee joint, elbow, and ankle with a separation of fragments and a widening of the articular surface, future function is endangered by this fact and by the possibility of non-union when the fragments are bathed by synovial fluids. Scudder's temporary clamps or Lambotte's long fine screws help much in maintaining close apposition, and voluntary joint movement should be begun very early.

Fractures of the patella need no comment. Operative retention is the standard and we have yet to decide whether immediate suturing or suturing after a few days yields the best results.

Fractures of Both Bones of the Lower Leg. Often traction in these cases is scarcely less important than in fractures of the femur, though it need not be so prolonged. It may be obtained by Sinclair's skate, or the glued sock, or by direct bone traction on the os calcis or malleoli.

Fractures of the Tibia. When the fibula is intact, traction is of less importance, but in the lower third and in spiral fractures displacement is often obstinate. In the long spiral fractures the Parham band is useful. In fractures of the lower third the common displacement backward makes it impossible to put the foot up at the desirable right angle, and sometimes it is wise to tenotomize the Tendo Achillis.

Fractures of the Ankle. In Pott's fracture the bone lesions are comparatively slight, yet the functional end results are too frequently bad. We believe the reason for this is the failure of most surgeons to recognize two facts: 1. That the fracture is produced by abduction of the foot; and 2, that the joint between the tibia and fibula is often spread and the foot displaced backward.

The standard treatment of reduction is therefore, first, to pull the foot forward, and second, to abduct it, retaining the correction by a plaster cast.

A not uncommon ankle fracture has been described by Cotton and consists of a fracture of the lower end of the tibia into the joint extending from an inch or two above the joint of the posterior aspect. This triangular portion of the tibia displaces upwards and backwards, leaving a jog in the articular surface, unless it be pulled downwards and locked by dorsal flexion of the foot.

Fractures of the Astragalus and Os Calcis. These are difficult and their treatment hard to standardize, since they vary in extent and location. In most astragalus fractures and in many os calcis fractures, the calcaneo-astragaloid joint is injured and the important lateral play of the foot partially or wholly lost. If partially, the result is more painful than when complete ankylosis occurs. Astragalectomy is at times justifiable, but less completely successful in adults than in children. In the fresh impacted fractures of the os calcis it is of great importance to correct malpositions, especially lateral displacements, and true up by open operation if necessary the lines of weight bearing, restoring as completely as possible the long arch of the foot.

Compound Fractures. Tinker,⁸ in this country, before the war urged a careful cleaning of all compound fractures and a removal of devitalized tissues. If this could be done within a few hours of the accident he advised that it be followed by immediate closure. LeMaitre and Duval taught the same lesson of early closure during the war, fighting against great odds of experience, but winning. The essential is getting at the cleaning process, or "debridement" as it has come to be called, within as few hours after the receipt of the wound as possible, not more than fourteen, and following a meticulous technique of dissection of devitalized tissue in which bacteria always develop. If the culture taken before this operation showed gas bacillus and streptococcus hemolyticus, they did not close immediately, but otherwise their rule came to be absolute in all early cases. It should be the standard treatment of compound fractures in peace and it must be a rare occasion when

attention cannot be given the case within the first few hours.

COMMENT

And in closing this long and very simple paper let me plead once again for the functional point of view in all treatment of fractures and joint conditions. If there is danger that joints will become ankylosed let us be sure that the position of ankylosis is that of greatest function—a shoulder in 70-80° of abduction; the upper arm halfway between the mesial and horizontal planes in slight outward rotation; the elbow, depending on the occupation, one side or the other of the right angle position, but never in extension; the wrist in half normal dorsal flexion; the hip in slight flexion and slight abduction and slight outward rotation; the knee in 10° of flexion in a man who must walk well and stand at his work, but in 20-30° of flexion in most women, who sit at their tasks; the foot at a right angle to the lower leg, and never abducted.

It is with considerable hesitation that I have discussed standard methods of treatment in certain of the common fractures, especially those about joints. My interest has been large, but my experience up to the time of the war had been small. We have never had such an opportunity to attempt standardization as the war gave us and never such a chance to observe the results of these attempts.

The one great outstanding conclusion from these experiences is that in the early treatment of fractures of the long bones, the essential factor in relieving pain, securing alignment, maintaining fixation, and in general minimizing shock,—is traction. Traction immediately applied and maintained without remission until union has begun and muscle spasm has ended. Of course, we must have radiographs in two planes, or better stereoscopic. We must have fixative splints, alone or in conjunction with Balkan frames, weights and pulleys, but we must have traction before all these,—traction of the earliest possible moment. Conviction as to this essential principle is the stronger because in earlier war work at a large base hospital in the rear we had obtained what we considered were fair results by fixation alone, usually by means of elaborately conceived and carefully applied plas-

ter casts. But we did not see the suffering of transport, though we appreciated the severity of shock, and we later learned that alignment could be better obtained and deformity more surely prevented by open splints and traction, than by fixative dressings alone, no matter how firmly they fixed. And so there came about the standardization of the transport splints for the army⁹, not more than seven of the open wire type, providing for traction and capable of being applied on the battlefield to every form of joint or long bone fracture. Moreover, it was demonstrated over and over again that as good end results could be obtained with the use of these splints up to the actual time of convalescence as by any other method.

Why should we not equip every hospital ambulance and every industrial plant with these splints? It appears to be our duty to urge such equipment.

It has been possible under stress and strain of war to standardize methods of treatment more than ever before, and the end results by and large have been impressively good. Individual care has often been wanting. In peace this can be supplied and will make end results still better, but the principle of standardization must be maintained.

Our patients have the right to demand the fullest amount of function at our hands, and standardization of methods of treatment by a study of end results will in some measure satisfy this just demand.

372 Marlborough St.

PARTIAL BIBLIOGRAPHY

1. Gallie: The Use of Boiled Bone in Operative Surgery. *Am. Jour. Orth. Surg.*, June, 1918, p. 373.
2. Blanchard: *Trans. Am. Orth. Assoc.*, 1900 and 1901.
3. Hoke: An Operative Plan for the Correction of Relapsed and Untreated Talipes Equinovarus. *Am. Jour. Orth. Surg.*, Feb., 1912, p. 379.
4. Biesalski and Mayer: *Die Physiologische Sehnenverpflanzung*. Berlin: Julius Springer, 1916.
5. Willems: Immediate Active Mobilization of Joints After War Wounds. *Archives Médicales Belges*, March, 1918.
6. Cotton: Adequate Reduction and Care in Colles's Fracture. *Boston Med. and Surg. Jour.*, Dec. 4, 1919, p. 651.
7. Pearson: Pad and Some Appliances for Gunshot Wounds of Femur and Back. *British Med. Jour.*, Aug. 24, 1918.
8. Pearson: Splints for Use in Arm, Ankle and Leg Injuries. *Lancet*, May 11, 1918.
9. Tinker: Radical Conservatism in the Treatment of Compound Fractures. *New York State Jour. of Med.*, May, 1909.
9. Keller, Osgood, Lambert, Blake, Baer, and Allison: *Manual of Splints and Appliances for the Medical Department of the United States Army*. London: Frowde and Hodder & Stoughton, 1917.

TREATMENT OF INOPERABLE PAROVARIAN CYST ADENOMA BY LAPAROTOMY AND RADIUM*

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Dr. Emil G. Beck read a paper before the Chicago Surgical Society December, 1918, in which he said:

"When confronted with a recurrent carcinoma of the breast or neck, for instance, the surgeon is apt to be too pessimistic in regard to the possibility of helping the patient. Usually the patient is referred to a roentgenologist for radium or x-ray treatment, partly to satisfy the hopes of the patient, who in his despair is happy to believe that something more can be done for him, and partly because we do not yet know definitely the possibilities of radium and x-ray therapy. We hesitate to do anything further surgically because we feel that if the surgeon was not able to eradicate all of the cancerous growth at the first operation, a second operation is apt to be much more difficult and not likely to be as radical as the first one. While recurrent cancer is not a promising field for the surgeon, still it seems to me that we have not yet exhausted all of our efforts in combating this dreadful foe. I have come to the conclusion that even in apparently hopeless cases something more can be done and I have endeavored to work out a method of meeting this problem.

"It is a well known fact that superficial malignant growths, such as epithelioma, respond readily to x-ray and radium treatment, while deep-seated malignant growths do not. The reason for this is very suggestive: the skin, fat, and subcutaneous tissues which usually overlie deep-seated cancer are strong filters for the penetration of the x-rays; they absorb most of the soft rays from the x-ray tube and allow only the hard rays, which is a small quantity, to penetrate deeply enough to reach the growth. Small quantities of radiation, instead of destroying the cancer-cell are apt to stimulate it to more rapid growth. Therefore it has seemed to me that if the skin and all the overlying tissue and as much of the growth as is feasible is removed and a large area left entirely exposed, and to this field is then applied either the x-ray or radium directly, we may obtain similar results

in treating deep-seated carcinoma as are usually obtained in treating superficial growths. In other words, our problem is to convert the deep-seated growth into a superficial one.

"To verify the above hypothesis I began to use this technique in selected cases. I started with a very simple method: Instead of closing the wound after the completion of the operation for cancer of the breast, I allowed the skin edges to retract as much as possible, in order to leave an opening through which the x-ray and the radium treatment might subsequently be allowed to penetrate directly into the cancer bed and destroy any cancer-cells which were inaccessible to surgical removal. I am aware that this has been done by others previously but I have carried the principle further. I have selected recurrent, apparently inoperable cases of deep-seated carcinoma, such as cases of cancer of the axillary and supraclavicular glands subsequent to removal of the breast, and in these selected cases I have removed intentionally large areas of skin, fat, fascia and muscles and as much of the carcinoma as is consistent with the safety of the operation. The entire area was left exposed for the application of either x-ray or radium treatment. During the past two years I have subjected a series of cases to this form of treatment and while it is too early to form definite conclusions, I desire to report the findings and results thus far obtained."

Dr. Beck then reports¹ several very flattering results of several seemingly hopeless cases. Along this line of treatment I wish to read the report of one of my own cases which seemed to me to be a wonderful result for a seemingly hopeless condition.

Report of case of inoperable cyst adenoma (parovarian) treated by laparotomy and radium.

Woman, aged 43 years; family history negative; first operated on for large cyst, extra peritoneal, right side, evidently parovarian and extended between the folds of the broad ligament. Recovery uneventful—recurrence three years later. Intraabdominal but could not be removed because of extensive adhesions and friability of cyst wall.

The tumor rapidly filled up and she consulted the Mayo Clinic and was told nothing could be done except x-ray and tapping if necessary. She had a few x-ray treatments but got no relief.

*Read before the Tri-State District Medical Society, Oct. 4-7, 1920, Waterloo, Iowa.

1. Surgery, Gynecology and Obstetrics. Oct., 1919.

The tumor now was large and the patient had much distress. Could not eat or sleep until tumor was tapped. Six to eight quarts were drained off every five or six days for eighteen times. By this time the body and legs were extremely edematous.

Under slight anesthetic (ether), I opened abdomen. A multilocular cyst was extensively adherent to bowels. Patient in poor condition. Drained with large rubber drain—inserted 50 milligrams radium in tube for 48 hours. Changed position every six hours. Left the tube in cyst after removing radium. Large amount of watery discharge at first but gradually became less. In two months time the patient was in fine shape and doing her own housework.

This radium was used in January of this year and up to the first of August the patient seemed to be perfectly well, but since then there is a cyst showing about the size of your fist on the left side and the patient is failing again. I would have used the radium in the other cyst which showed up later but the people would not agree to it.

DEFECTS IN THE PRESENT METHOD OF ATTEMPTS TO CONTROL VENEREAL DISEASES; SUGGESTIONS*

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CHICAGO

Venereal diseases are reaching a dangerous high water mark. This is especially true of gonorrhea. Measures aimed at stamping out of the so-called red plague have been largely ineffectual as shown by the evident increase of new cases that are daily appearing. Manifold as have been the suggestions and plans devised with the idea of controlling this monstrous evil the actual survey will show very unsatisfactory results and the expectation of many enthusiastic but short-sighted disciples of panaceas which have been given more or less consideration and attempted enforcement must realize if they are open to conviction, that bad matters have been made worse, if anything, by attempted cures. The law such as has been passed in this state is a flagrant example of misconception and miscalculation, for its impracticability should have been realized before it was approved. The American

Social Hygiene estimates its effectiveness at 5 per cent and as many of these cases are dispensary in character, the real figures would be next to nothing. Practically all heralded claims made for the law have dwindled to pigmies and it has created much actual harm and done damage. Its whole foundation was so rotten that it was certain to collapse if put to an actual test, for its provisions were impossible and dangerous.

Many advocates of the methods pursued in the Army during the war hoped that the information and instructions given to the soldiers would be of untold and everlasting benefit. In this they were mistaken, for thousands of soldiers who had never had a venereal disease lost but little time when they received their discharges and realized that they were free lances once more, and the number of new cases among these men were surprising and disappointing, to say the least. The many talks and demonstrations which they had been given while in service sank into oblivion when their sexual desires became overstimulated and the proper chance presented itself, and opportunities these days are not lacking. The world seems sex crazy and thousands of social workers, ministers, college professors, and what not are paying more attention to these subjects than they are to their real vocations. Too many such self-appointed would-be experts are in existence and their activities should be discouraged and curbed. There has been too much written on sex matters by people that know only theories and are not posted on real facts.

With all the old time sin and misdoings there was a large preponderance of actual decency and modesty. These fairly satisfactory conditions have been torn asunder, so to speak, and sex topics have been on the menu continuously for the past *too long*.

What are some of the manifest defects in the present efforts to check race suicide and lessen the scourge which has made deadly inroads into our midst?

1. The law that forbids the sale of all the old well known protectors, namely rubber condoms, should be immediately repealed. In bygone days a boy or man determined to seek illicit sexual intercourse would usually quietly drop into a drug store and secure one or more of these and would usually escape infection. Now the druggist will inform him that their sale is illegal. This change should be made without delay and

*Read before Chicago Medical Society, November, 1920.

this class of goods should be easily secured and their use strongly advocated.

2. If it is good policy to publicly warn men and boys of the terrible ravages and possibilities of venereal diseases by such methods as placarding public toilets, and so forth, it is even more necessary to give proper warnings to women and girls, but for some unaccountable reason this has been neglected or overlooked by those who are advocating and spreading this propaganda. Women could be told in terms that would not be shocking and still convey truth that could not be well mistaken. I have formulated and printed cards for boys and girls that are brief, but to the point. They contain no vulgarities or revolting declarations but have a direct line of thought that cannot be easily mistaken. Some such method would do much without shocking modesty. Their use could be limited to schools and they at least would put a question mark in the minds of adolescents that might do much good and ignorance could not be made an excuse for the evil deeds that spell ruin to many. The boy's card reads as follows:

Boys, show yourselves that you can go about the right way when your sensations of passion come, when you are twelve to sixteen years old. Bad diseases which you may get if you do wrong are easily contracted, almost impossible to get rid of, and often cause much real suffering and sometimes death. Shun bad pictures and stories as in the end they cannot fail to do harm in one way or another. Do not attempt liberties with good, sweet girls, as it may result in lives of shame and suffering and make bad women out of those who would otherwise become good wives and mothers. A man to be great must master his mind and feelings. Treat girls as you would want other boys to treat your sister. Be a manly man, play much in the air and sunshine and be happy.

The girl's card reads as follows:

Girls, where do you suppose you will find yourselves if you lower your own self-respect by allowing yourselves to commit any secret doings with boys or men (no matter what sort of a tale they may tell you) that you would not have your mother or teacher know of? I can tell you where thousands of girls who have been foolish enough to enter into some such dangerous folly have landed—one place is remorse and regret, another is the hospital with agonizing pain, another the morgue. Be wise and take no chance of losing your good name and health. Protect your body and good name by refusing to drink any intoxicating drinks at any place or any time. The first change from girlhood to womanhood occurs when you are from twelve to sixteen years old. Your mother or some other good woman will

tell you of a little change that comes to you at this age. Play much in the air and sunshine and be happy.

3. One of the greatest causes of new cases of venereal diseases is phimosis and still no intelligent effort has been made to correct these cases. In examination of ten thousand soldiers at Camp Syracuse, approximately 2,100 of these had tight foreskins with all the unfortunate and far-reaching possibilities. These cases were mostly suffering with a balanoposthitis. Talking prophylaxis to most of these men was a travesty for manifest reasons, and still in the great army no intelligent or determined effort was made to correct this great evil and I noted men who had been in the Regular Army for five years with extremely tight prepuce that could only cause trouble. At one post I asked the commanding officer for permission to correct these cases, many of which could have been done by properly performed dorsal slit, but I did not receive strong encouragement. There are millions of cases of phimosis in this country. These are the cases that usually easily contract venereal diseases. It would pay the government from an economical standpoint big returns, if a fee for proper circumcision were paid to surgeons in the cases of baby boys when they are a few weeks or months old. Put posters up in plenty telling of the dangers of phimosis. Most cases of syphilis and so-called chancroids are due directly to a tight frenum or inflamed foreskin.

4. Venereal prophylaxis should be put on a solid foundation. Packets, tubes and so forth are usually missing at the time needed, but there is usually a piece of soap within reach and the proper use of soapsuds used thoroughly and carefully will greatly diminish the number of new cases. Soapsuds ordinarily are far better than ointments, etc.

5. A colossal crusade that in some manner will change the present fashions so far as women's dress or undress is concerned is desperately needed in order to bring men's constantly overstimulated sexual propensities back to a state of stability and soberness. This essential need is indisputable, but it is going to be a Herculean task to execute.

6. Venereal diseases have been handled and treated in the main in a slipshod and incompetent manner, thus prolonging the course and contributing to complications. In cases of syphilis

intravenous or intramuscular injections of large doses of soluble mercury are strictly indicated, if we expect permanent cures, and still salvarsan is used almost exclusively by many physicians. However, I believe that there is no apparent increase in new cases of this disease, although about as many as ever are turning up. But we should cure the disease and not let it reap its later and terrible effects on the patient himself. Gonorrhea which means suffering, race suicide, tens of thousands of mutilating operations each year and frightful results of many descriptions is increasing at an alarming rate.

New cases are the order of the day and the superabundance of them tells us that we are not checking its terrible ravages in an effectual manner. The treatment of gonorrhea, both male and female, has made little or no progress. Much that has been lauded and attempted has simply done more harm than good. This applies to nearly every form of treatment that has been suggested. If gonorrhea in its early and acute stages was left entirely alone except for cleanliness might we not believe that it might be best rather than the voluminous efforts now made that as a rule do but little good and tend to do harm and increase the disease as to its virulence and intensity? I am convinced there are tens of thousands of cases of gonorrhea that are made worse through injudicious, careless, or ignorant treatment. This spreads the disease broadcast, due to creating complications that spell too often incurable and recurrent exacerbations of many types. Many present methods of treatment of gonorrhea, acute and chronic, are very questionable and inadvisable. Extreme gentleness, such as we would use in taking care of an inflamed eye, is absolutely requisite if we hope to cure the disease. Solutions for injection and irrigation should be almost homeopathic in strength and dilution. Pressure and trauma should be eradicated. Argyrol and its substitutes appear to be questionable therapy, for even with their apparent bland properties their continuous use seems to act as an irritant and increases rather than decreases the condition and discharge. In using irrigations we are often tempted to have our permanganate solution rather deep red in color. That coats the membranes with an irritating chemical and creates trouble. It is far better to use a solution with only a faint trace of pink to be seen and have it as warm as the

patient can comfortably tolerate. All other solutions should be reduced about six times the present strength used, in order to be safe. Every physician who treats much gonorrhea has too often brought to his attention and conscience cases of gonorrheal epididymitis, posterior urethritis, seminal vesiculitis, and so forth, that are directly caused by his manipulations. Indiscriminate prostatic massage which does untold harm is a flagrant example of this fact. Some physicians injudiciously almost make it routine treatment, without considering the case.

Personally, I do not claim exemption from these charges, for I have only too often had to realize the bitter truth that I was in all probability responsible for what the patient attributed to slipping, falling, or straining so-called. It was my slipping and not his that put him to bed with plenty of pain, fever, and discomfort. Instrumentation cannot possibly be done too gently or carefully. Force and haste are to be discouraged. Cystoscopic and urethroscopic examinations should not be routine but only indicated at times. Often in a case of deep-seated chronic process it is better to "let the sleeping dogs alone" for complete cures are seldom realities, but stirring up trouble is unfortunately too frequent to be easily overlooked.

Recently I have been told that approximately one-fifth of the chronic cases coming under the professional care of physicians sooner or later landed in the hospital with some acute complication due to too much manipulation or the use of too strong applications. These are facts not especially appetizing, but they must be considered if we are to make a successful fight against the terrible inroads that gonorrhea has gained and is still gaining. The same doctrine applies to the treatment of the female patient as well. Tens of thousands of women with a chronic gonorrhea infection located in and about the Nabothian glands of the cervix uteri that is quiescent come to the physician for relief of the tenacious mucous discharge. Examination cannot be done too gently. A speculum inserted that strikes this cervix may by that slight trauma spread the disease to adjacent adnexa, spelling acute salpingitis with all its horrible meaning. Curettements for mild chronic conditions are too often followed by chills, fever and pus tubes. This operation should be reserved for the proper indication and not be made a matter of routine

in every case of a slight leucorrhea. Even digital examination cannot be done too carefully or gently. Rough tactics have done considerable harm. Pessaries and mechanical devices generally, including tampons, are to be discouraged as they are too often the cause of real trouble. Medicated bougies are distinctly contraindicated, as the presence of a foreign substance can only irritate. In applications of medicine to the cervix gentleness and weak solutions should ever be borne in mind. Nature has a way of doing things and we must be careful in attempts to jugulate it. Gonorrhea in both male and female has been largely treated in an indifferent, careless or ignorant manner and such methods are simply spreading what we are hoping to eventually lessen and in a sense eradicate.

I have seen physicians insert sounds in the urethra within a few weeks of an acute primary attack. They undo all the good they have accomplished and then some. Gonorrhea cannot be treated too carefully or consistently and the sooner we wake up to that fact the sooner we will see the day when we can truly say gonorrhea at last is under control.

Let us all do our best and try and do better work along these lines.

CONCLUSIONS

1. Make it possible to secure rubber condoms easily.
2. In a judicious and inoffensive manner advise women of the dangers of venereal diseases.
3. Put in effect a movement looking to the proper circumcision of all that need it.
4. Put venereal prophylaxis on a practical basis.
5. Make an effort to bring to the attention of women the fact that their present modes of dress are strongly against their own best interests.
6. A better understanding of venereal diseases is badly needed in order to do ourselves and our patients justice.

The good housekeeper is one who sees to it that she has clean air in the home. And to this end she thoroughly airs both sleeping and living rooms every day.

Medical science has made it possible for you to protect your children against diphtheria. Ask your family physician or call the Department of Health and you will be told what to do.

VACCINATION DOES PREVENT

In Cuba, under Spanish rule, smallpox was widespread. The United States took charge January 1, 1899, and used vaccination to get rid of the malady. In Havana alone, in the thirteen years prior to that date, there had been 5,355 deaths from smallpox; in the thirteen years following there were but seven.

What vaccination did in Cuba towards stamping out smallpox, it has done in other parts of the world and will do in any country or community where vaccination and revaccination is enforced.

Germany is a country which knows that vaccination prevents smallpox. In 1874 vaccination, which had been compulsory in the German army since 1834, was made compulsory for the civil population as well, so that now every child in the country is vaccinated during its first year of life; again, all school children are required to be revaccinated in the year in which their twelfth birthday occurs, and the vaccination is repeated when one enters the German army.

—*Bulletin Chicago School of Sanitary Instruction.*

A NOVEL BY DR. LYDSTON

The Burton Publishing Co., of Kansas City, Mo., announce the forthcoming publication of "Trusty 515," a sociologic novel by Dr. G. Frank Lydston. The central theme of the story is the trial and conviction of an innocent man for murder. The hero's adventures in and out of Sing Sing Penitentiary and in a Western mining camp in the early days of the gold excitement at Deadwood, Dakota, are depicted in forceful and dramatic style. Among other themes of social interest are the relations of capital and labor and some of the fallacies and absurdities of our penal system, notably the sometimes farcical method of empaneling a jury. The system of political corruption and the political pull of "Gangland," which enabled a certain "boss" and "heeler" to "job" the hero, is handled with vigor and emphasis. A love story is, of course, woven into the novel. The publishers are preparing an author's numbered and autographed edition which shortly will appear.

The old idea that swamps breed malaria was next door to the truth. For we know now that the swamps breed the mosquitoes and they breed malaria. It should be remembered, however, that the mosquito must first bite or sting a person who has malaria; and once it is so infected, then and then only can it transmit the disease to other human beings.

An even temper, a spirit of cheerful optimism, together with right habits of living, plenty of sunlight in the home and sunshine in your heart, lots of fresh air and judicious exercise, will tend to keep you young a long time.

If you don't want to have smallpox, vaccinate. And, above all, do not procrastinate, just vaccinate. In other words, be protected.

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State society will pay no bills for legal services except those contracted by the Committee. Notify the Chairman at once. Do not employ attorneys.

* Send original articles and all communications relating to advertisements to Dr. Charles J. Whalen, Editor, 4647 Dover Street, Chicago.

Membership correspondence to Dr. W. H. Gilmore, Mt. Vernon, Ill.

Society proceedings and news items and changes in the mailing list to Dr. Henry G. Ohls, Managing Editor, 927 Lawrence Avenue, Chicago.

Contributors will submit all copy for publication typewritten on standard size paper and double spaced. Copy not complying with this rule will be returned, if convenient.

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APRIL, 1921

Editorial

MAKE HOTEL RESERVATIONS EARLY FOR THE STATE MEETING.

THE ANNUAL MEETING OF THE STATE MEDICAL SOCIETY WILL BE HELD IN SPRINGFIELD, ILL., MAY 17, 18 AND 19, 1921. THE STATE LEGISLATURE IS IN SESSION DURING THAT TIME. THE HOTELS ARE VERY MUCH CROWDED AND IT BEHOOVES EVERY ONE WHO CONTEMPLATES ATTENDING THE MEETING TO MAKE HOTEL RESERVATIONS EARLY.

ATTENTION DOCTORS DESIRING TO READ PAPERS AT THE STATE MEETING:

Those desiring to read papers before any of the sections should communicate with the officers at once. The following are the officers of the sections:

Section on Surgery.—Geo. S. Edmondson, chairman, Clinton; W. H. Amerson, secretary, Chicago.

Section of Medicine.—W. L. Callaway, chairman, Chicago; H. A. Chapin, secretary, Jacksonville.

Section on Public Health and Hygiene.—J. H. Siegel, chairman, Collinsville; Mary J. Kearsley, secretary, Chicago.

Section on Eye, Ear, Nose and Throat.—Chas.

F. Burkhardt, chairman, Effingham; A. H. Andrews, secretary, Chicago.

THE NEED OF DOCTORS IN OUR LEGISLATIVE HALLS.

The *Lancet Clinic* in an issue a short time ago, says: "We should have at least as many physicians as lawyers in Congress." Whether this is the right percentage or not is immaterial, but it is a fact that the medical profession should be better represented numerically in our legislative halls.

At present a great deal of attention is being paid to legislation which vitally affects the health of the people along lines known as the general socialization of medicine. All this is of vital importance to the health welfare of the people for, under such schemes, the people will get the poorest kind of medical service, thereby increasing the morbidity and mortality in the community. No one is better equipped to give advice and direct legislation along proper lines than the physician who has come in contact with the people and who understands conditions under which they are obliged to live. The physician knows best the needs and requirements of the people in the way of regulation and control of

food supplies, sanitation, hygiene and all other matters that have to do with the physical welfare of the community.

The medical members of the English House of Commons in 1920 numbered ten and it is claimed that this number is only the advance guard, that the number would be materially multiplied at subsequent elections.

OREGON TAKES THE PRIZE FOR PROPOSED FREAK MEDICAL LEGISLATION.

Northwest Medicine for March, 1921, in speaking of proposed quack legislation in that state, says:

The final attempt to get the goat of the Doctors, and largely backed by the Christian Scientists, provided "that all prescriptions should be written in English; they should be written in triplicate and should contain the patient's name and address, a concise statement of the disease and the exact symptoms for which it was given." This interesting, though absurd composition, was beaten in the Senate committee.

THE MEDICAL PROFESSION IS THE ONLY CLASS OF MEN WHO WORK AGAINST THEIR OWN WELFARE, INTEREST AND BUSINESS.

Of all people, all professions and classes we, of the medical profession, stand alone, distinctly and unquestionably the only class of men on earth who work directly against our own welfare, interest and business. We not only adapt ourselves to killing our own business, but have gone so far as to pay taxes to take business directly from us. We are showing the people how to overcome all things insanitary, discover and combat all things that convey or produce disease, urge legislation for safety devices in all lines of life and commerce. Where can a grocer be found who would advise his patrons to quit eating meat or groceries, the merchant who will advise you to wear old clothes and quit buying new ones; the shoemaker who will tell you to go barefooted; the railroad man urging the public to walk instead of riding, or the legal profession teaching the people how to avoid lawsuits?

BRING THE DAVID AND GOLIATH PARABLE UP TO DATE. HEALTH INSURANCE AGITATION IS NOT DEAD.

Because of the action of the House of Delegates of the American Medical Association at New Orleans (April 27, 1920), in unanimously condemning compulsory health insurance, state or nationally controlled, a goodly number of Doctors have been lulled into a sense of security regarding the danger of the enactment of health insurance laws in this country.

These men are due for a rude awakening, for the proponents of the scheme are by no means inactive or discouraged. The medical profession should understand that the A. A. L. L. (American Association for Labor Legislation) did not get control of *Modern Medicine* as a favorite indoor sport and did not make *Mr. John A. Lapp* and Drs. Alexander Lambert and Sigismund S. Goldwater Editors and establish an office for the *lay-editor*, *Mr. Lapp*, in Chicago, for fun. They have state medicine and the national socialization of medicine in view in Illinois and New York and elsewhere, and while apparently bowing to the Vox Populi on Compulsory Health Insurance will jam through state medicine unless the people know what it is and say their say. In the case of David vs. Goliath, David was an incident, the sling was an instrument, it was the stone that put Goliath to sleep. If we doctors will change that stone to votes we can bring the parable up to date.

TOO MANY LAWS AND NOT ENOUGH RESPECT FOR THOSE WE HAVE.

Our country is suffering from a severe auto-intoxication resulting from clogged legislative powers. During the past ten years a gluttonous quantity of "freak" legislation has been jammed down the statutory throat by a biased citizenry whose heart's desire it is to cut every voter's pantaloons of the same size and by the same pattern. Unfortunately, what is one man's girth is another man's neckband. The consequence of attempting to stamp pet prejudices of divergent classes upon the universal life of the nation is resulting in an acute civic colic.

Instead of acting as a panacea for economic ills the much advertised "remedial legislation"

proves in many instances to be only the most arrant quackery in itself, or the handmaid of some pernicious socialistic nostrum.

As a result, the laws of the land are becoming a stultified segment of freedom with all natural peristalsis proceeding where the woodbine twineth! A decade since every grouch and old maid with furry tongue vented spleen and bile in the protest "There'd ought to be a law" whenever a pet corn was trod upon. Today the peeved individual, thus injured, proceeds to put the law on the statute books.

This is an age of sentimentalism. A minority group of uplifters are attempting to standardize the people not only physically, but morally and mentally. Under the plan we are to be impressed into certain standard patterns, although the moral standard pertain to non-essentials rather than vital matters. For instance, our habits of recreation, such as drink, tobacco, cards and the like, are to be regulated while the social evil and many others continue with little molestation.

This same sentimentalism and utter lack of common sense and logic has effected various other reform movements. Immigrants must be Americanized by being taught to speak English as if the ability to converse in English make good citizens and ardent patriots. Labor must not strike because a few unions misuse their power. The Nation must be dry because a small percentage of men have insufficient will power to be moderate. Murderers must not be executed, as death might hurt them. Yet where is the pity for the murdered? Vivisection must be stopped. Yet how shall surgeons obtain knowledge of the activities of the human body and perfect their technique for operation? No doubt, men have been cruel at times in their experiments on living animals. But butchers are abhorred in the laboratory; they make poor surgeons, and unfortunately are few in number.

These noisy publicity-seeking uplifters are proceeding with much the same fatuous irresponsibility as the maid who spilled the baby with the bath. Yet a law passed and all is well. Not long since we read some verses in a magazine entitled, "Pass a Law."

If you neighbor smokes,
Tells you pointless jokes,
Pass a law.

If your minister's a bore,
And his dogmas make you roar,
Pass a law.

If the sunlight hurts your eyes,
And your friends all tell you lies,
Pass a law.

Never has thoughtfulness and caution about medico-politico economic measures been more needed than at present. A wave of emotionalism has swept over the country. Whatever is, is assumed to be wrong. Change, regardless of its results, is assumed to be synonymous with progress. Practically any public measure, nominally designed to change existing conditions and labelled a "Welfare Bill," can secure wide and unquestioning support, utterly regardless of its merits. The unscrupulous politicians, office seekers and professional agitators, who are palpably exploiting such measures, are being exalted in the esteem of a deluded public. Those who urge sanity and caution or who dare to protest when wanton injury is threatened to their private rights and interests are being branded as "reactionaries" or vilified as selfish opponents of progress. In propaganda, facts, experience, common sense, economic laws, suitability of means to ends, traditional principles of government, etc., are all being ignored, falsified or treated with contempt. It is regrettable that a few medical men occupying positions of trust in our medical organizations have been moved to contribute to this politico-economical confusion in both its medical and civic aspects.

Unless a drastic purge is administered and the legislative system cleaned of its load of would-be reformatives and sentimental sinecures, the United States of America is going to wake up some morning to find that the poison of Bolshevism, the nausea of revolt and the complete paralysis of its vision have laid low the heritage of our fathers. Get some of the laws off the books that make every town-gossip, village critic and hot-stove czar literally the keeper of millions of his brothers of whom he knows nothing and wouldn't be able to learn if he had to, and watch the result. Who is better able to direct safe and sane legislation than physicians? Let us have more of them in our legislative halls.

Illinois State Medical Society

PRELIMINARY PROGRAM

SEVENTY-FIRST ANNUAL MEETING

Springfield, May 17, 18 19, 1921

SECTION ON SURGERY

Oration in Surgery. "Prehistoric American Surgery." — With Lantern Slides — Leonard Freeman, Denver, Col.

Factors Determining the Efficiency of Operations Upon the Stomach—W. Wayne Babcock, Philadelphia, Pa.

Empyema, Closed Treatment, motion pictures—(By Invitation)—Arvine E. Mozingo, Indianapolis, Ind.

Discussion opened by O. F. Shullian, Quincy.

Visceroptosis—James A. Day, Springfield.

Post - Operative Pulmonary Complications — F. A. Norris, Jacksonville.

Psychology a Factor in Surgery—F. H. Gunn, E. St. Louis.

The Indications for Surgical Treatment of Uterine Fibroids—E. B. Montgomery, Quincy.

Discussion opened by Chas. L. Patton, Springfield.

Some Surgical Aspects of Endocrinology—Don W. Deal, Springfield.

Relation of Group Practice to Surgery—Edward H. Weld, Rockford.

Discussion—Carl Beck, Frank Smithies, Chicago.

The Management of Abdominal Wall Infections —A. M. Miller, Danville.

Discussion opened by Coleman Buford, Chicago.

Spontaneous Tumor Growth in Abdominal Incision Preventing Healing—L. B. Elliston, LaSalle.

Lipoma of Kidney With Report of Cases—J. W. Alexander, Charleston.

Discussion opened by E. P. Sloan, Bloomington.

Carcinoma of Breast with Report of Cases—Carl Black, Jacksonville.

Acidosis In Surgical Anesthesia—M. E. Rose, Decatur.

A Plea for a More Thorough Examination of the Back, from a Surgical Standpoint—Jay Harvey Bacon, Peoria.

Present Status of Bile Tract Surgery — Arthur Dean Bevan, Chicago.

Discussion—Dean Lewis, Chicago.

Treatment of Complete Prolapse of the Rectum in Adults—Chas. J. Drucek, Chicago.

Discussion — Channing Barrett, Chicago, Frederick Besley, Chicago.

Ulcer Cure Following Gastric Surgery—Karl Meyer, Chicago.

Discussion—R. W. McNealy, Chicago.

Jejunal Diverticula — Hugh N. MacKechie, Chicago.

Discussion—John R. Harger, Chicago.

Acute Aneurism—R. W. McNealy, Chicago.

Discussion—Karl Meyer, Chicago.

Treatment of Unusual Fractures—C. R. G. Forrester, Chicago.

Discussion—C. W. Hopkins, Chicago, C. E. Pierce, Chicago.

Management of Fractures Near the Joint — Philip H. Kreuscher, Chicago.

Discussion—Geo. Thompson, Chicago.

Bismuth Paste Injections for the Treatment of Cervicitis and Endocervicitis—A. R. Hollender, Chicago.

Discussion—J. R. Pennington, Chicago.

Congenital Pyloric Stenosis—John A. Graham, Chicago.

Discussion—M. L. Harris, Chicago.

Surgery of the Large Bowel—Carl B. Davis, Chicago.

Discussion—Geo. Apfelbach, Chicago.

Non-perforative Appendicitis with Peritonitis and Abscess—G. L. McWhorter, Chicago.

Discussion—Carl B. Davis, E. M. Miller, Chicago.

Obturator Hernia—Leigh F. Watson, Chicago.

Discussion—Karl Meyer, Chicago.

Sliding Hernia—Warren Johnson, Chicago.

Discussion—A. M. Brown, Chicago.

Preliminary Report of Pneumoperitoneum in Gynecology—W. J. Woolston, Chicago.

Discussion—B. Orndoff, Chicago.

A Classification of Proctologic Fistula: Treatment of Each Variety—J. Rawson Pennington, Chicago.

Discussion—R. H. Heterick, U. S. P. H. S., Cassius C. Rogers, Chicago.

SECTION ON MEDICINE

Foot Problems (Illustration Films)—Elizabeth B. Ball, Quincy.

Discussion—C. W. East, Springfield.

Psychopathic Children, Their Recognition and Treatment—Graves B. Smith, Godfrey.

Organotherapy in General Practice—C. V. McMeen, Springfield.

Early Neurological Symptoms in Primary Anemia—Garm Norbury, Jacksonville.

Pituitary Extract in Treatment of Diabetes Insipidus—Henry A. Cables, East St. Louis.

Discussion—C. M. Jack, Decatur.

Several Important Points in the Diagnosis of Pulmonary Tuberculosis—Roswell T. Pettit, Ottawa.

Discussion—Chas. E. Cole, Jacksonville.

Hypothyroidism—David B. Penniman, Rockford.

Why the Fifteen Thousand—J. S. Templeton, Pinckneyville.

Discussion—Geo. Parker, Peoria.

SYMPOSIUM—"FOCAL INFECTIONS"

Focal Infections from the Surgical Standpoint—C. U. Collins, Peoria.

Discussion—Dr. Albert M. Miller, Danville.

Diagnostic Value of Roentgenology in Focal Infections—F. S. O'Hara, Springfield.

Discussion—Dr. Hart, Decatur.

Essay on Medicine—Differential Diagnosis of Early Tuberculosis from Other Apical Pulmonary Inflammations. (Demonstrated by lantern slides)—Kennon Dunham, Cincinnati, Ohio.

New Viewpoints in Nutrition in Infancy and Childhood—Albery Henry Byfield, Prof. Pediatrics, State University of Iowa, Iowa City, Ia.

Some Points in the Diagnosis of Late Hereditary Syphilis—B. Barker Beeson, Chicago.

Discussion—William Allen Pusey, Chicago.

Therapeutics of Occupation in Mental Disorders (Lantern slides)—Chas. F. Read, Chicago State Hospital, Dunning.

Discussion—Frank Parsons Norbury, Springfield.

Syphilis of the Stomach with Report of Cases—Milton H. Mack, Chicago.

Clinical Study of Chronic Infections—Ernest E. Irons, Chicago.

Discussion—Theodore Tieken, Chicago.

Focal Infections in Dentistry—Charles Bentley, D. D. S., Chicago.

Discussion—Dr. Thomas L. Gilmer, Chicago.

Focal Infections of Genito-Urinary Tract—

Herman Kretschmer, Chicago.

Discussion—J. A. Nagel, Chicago.

The Role of Focal Infections in Neurology—C. B. King, Chicago.

Discussion—J. R. Ballenger, Chicago.

Focal Infections in Ear, Nose and Throat—M. W. Brucker, Chicago.

Discussion—Thomas J. Williams, Chicago.

Lesions of the Spinal Cord (Lantern slides)—J. Elliott Royer, Chicago.

Discussion—Archibald Church, Chicago.

The Diagnostic and Therapeutic Value of Non-surgical Biliary Tract Drainage in Patients Exhibiting Biliary Tract Disease Upon Whom Surgical Procedures have Previously been Performed—Frank Smithies and Richard Bartlett Oleson, Chicago.

Epilepsy—James C. Gill, Chicago.

Discussion—George W. Hall, Chicago.

A Report on the Treatment of Chronic Cervicitis and Endo-Cervicitis by Bismuth-Paste Injections—A. R. Hollender, Chicago.

Discussion—Emil G. Beck, Chicago.

Colitis—William J. Butler, Chicago.

EYE, EAR, NOSE, AND THROAT

The Clinic for the section will be held at St. John's Hospital, beginning at 1 p. m., May 17.

The sections banquet will be in the Sun Parlor of the Leland Hotel, at 6:30 p. m., May 17.

The price per plate, will be \$3.50.

Members expecting to attend the banquet, should notify Doctor John E. Deal, Springfield, who has charge of the arrangements. The officers of the Section are hoping that Col. Smith, of London, will be the guest of the Section, and that he will give an address Tuesday evening following the banquet.

The following papers will be read and discussed at the reading room, of St. John's Hospital, beginning at 9 a. m., May 18, 1921.

Practical Perimetry—Harry S. Gradle, Chicago.

Discussion—George F. Suker, Chicago.

Two Problems in Bronchoscopy and Their Solution—G. W. Boot, Chicago.

Discussion—Otto J. Stein, Chicago.

Precautions Necessary in Cataract Operations—W. A. Fisher, Chicago.

Discussion—H. H. Brown, Chicago.

Refinements in Cataract Operations—C. B. Welton, Peoria.

Discussion—W. O. Nance, Chicago.

Methods of Applying Radium in Diseases of the Upper Air Passages—Otto T. Freer, Chicago.

Discussion—R. Sonnenschein, Chicago.

Retro-Bulbar Neuritis of Ethmoid Origin—W. G. Reeder, Chicago.

Discussion—J. C. Beck, Chicago.

Status Lymphaticus—R. J. Tivnen, Chicago.

Discussion—A. L. Adams, Chicago.

Legal Compensation for Visual Loss—Frank Allport, Chicago.

Discussion—R. J. Tivnen, Chicago.

Ocular Manifestations of Syphilis—E. F. Garrahan, Chicago.

Discussion—W. R. Fringer, Rockford.

Practical Points in Tonsillectomy—W. H. Peck, Chicago.

Discussion—Louis Ostrom, Rock Island.

Stricture of the Lachrymal Canaliculi With Improved Operative Technique—J. M. Miller, Kankakee.

Discussion—J. S. Clark, Freeport.

Bilateral Abducens Paralysis—H. W. Woodruff, Joliet.

Discussion—W. P. Walter, Evanston.

Intracranial Complications of Nasal Accessory Sinus Disease—C. F. Yerger, Chicago.

Discussion—H. C. Ballenger, Hubbards Woods.

Difficult Cases in Bronchoscopy—Edwin McGinnis, Chicago.

A Modification of the Submucous Resection Operation—O. J. Nothenberg, Chicago.

The time for reading papers will be limited to ten minutes and discussions to five minutes.

SECTION ON PUBLIC HEALTH AND HYGIENE
Hygiene in Tuberculosis—M. W. Harrison, Collinsville.

The Medical Aspects of Malnutrition in Children
Caroline Hedger, Chicago.

Certified Milk—J. W. VanDerslice, Chicago.

The Campaign for the Prevention of Syphilis—Arthur W. Stillians, Chicago.

SECRETARIES CONFERENCE

The County Secretary as Viewed by the County President.

The County Secretary as Viewed by the County Secretary.

The County Secretary as Viewed by the Members.

THE UNIVERSITY OF ILLINOIS MEDICAL DEPARTMENT STATES ITS POSITION

The position of the University of Illinois so far as it bears on the University's relation to the private practice of medicine is stated clearly in the following paragraph:

"It must co-operate with State and County Medical Societies. It must gather its materials through the physician. It must supplement but not duplicate the work of the practitioner. It must co-operate with but not compete with the medical profession."

THE COLLEGE OF MEDICINE OF THE UNIVERSITY OF ILLINOIS

A. C. EYLESHYMER, M. D., Ph. D.

Dean

CHICAGO

The growth of our College of Medicine has not been unlike that of other medical colleges. They were all born under other skies; fondled and nourished by loving parents in private homes; but sooner or later became so expensive that they were turned over to universities. Thus our medical college was born in privacy in 1882. Through early childhood it grew as the College of Physicians and Surgeons; in later childhood (1897), it was placed under the guardianship of the University of Illinois. In 1912 it broke away from its guardian but was soon reclaimed. In 1913 it passed into adolescence and was legally adopted and rechristened. Today it looks forward, wondering if it will ever reach maturity.

The first object of the medical college is to train men to become good doctors. The second is to prepare men to become teachers in medical colleges. A good doctor is one whose work is not only the alleviation and cure of disease, but also the prevention of disease. A good teacher is one who not only reproduces the known facts but also produces new facts and thus adds to the known. In training men to become doctors or teachers we must always have in mind the development of two qualities: the one, to imitate whatever has been well done under well defined conditions; the other, to initiate new procedures when new conditions arise. These are the central thoughts around which medical education is being built.

In the making of good doctors and teachers the university must adopt certain educational re-

quirements and provide the resources for meeting these requirements. These resources include professional teachers, libraries, laboratories and clinics.

Educational Requirements.—Since assuming control of the College of Medicine the University has gradually increased the educational requirements, both for entrance and for graduation. In 1913 a year of college work was required for admission in addition to the completion of a four-year high school course. In 1914 a second year of college work was added; thus all students entering the medical college since 1914 have had two years of college work before entering upon the medical work proper. In 1915 the work of the first two years in the medical college was of such a grade that the university considered it equal to the work given in its other colleges and authorized the granting of the degree of Bachelor of Science upon the completion of these two years. In 1916 a Graduate Summer Quarter was organized. This was the first attempt among medical colleges to set apart a summer quarter to be devoted exclusively to graduate work leading to the degree of Master of Science or Doctor of Philosophy. The work attracted the attention not only of medical educators, but also of educators in other fields. In 1917 the medical course itself was extended from four years to five years. In the fifth year the student may devote his time to the introductory practice of medicine, as an interne in a hospital, or in case he wishes to prepare himself for a professional career, as a teacher in one of the preclinical branches, he may devote this year to special preparation for the field of his choice.

With standards of entrance and requirements for graduation as high as any medical college in the country with the exception of Johns Hopkins, Yale and Western Reserve, we were obliged to turn away students in 1919, and last year were obliged again to refuse admission to a large number of well qualified students.

Teachers.—In 1913 the University began the reorganization of its faculty by obtaining a number of eminent men in the laboratory branches and placing them on a university basis. They were paid salaries and thus enabled to devote their entire time to the work of the medical college. In the course of two or three years the

university had built up an efficient teaching staff in the laboratory departments, but with the beginning of the war many of our ablest men entered the service. Since the close of the war economic conditions have been such that teaching positions on a vocational basis are no longer attractive. In common with other medical colleges we have been able to retain only those teachers who have passed the age of elastic readjustment. The younger men who had contemplated, or had prepared for, a career in teaching have realized the conditions confronting them, and either have turned to commercial lines or have accepted teaching positions on a half-time basis, with the privilege of devoting the remaining time to the study of medicine, and with the view of withdrawing from teaching as soon as they have qualified for the practice of medicine. With students increasing in numbers and educational attainments, and teachers decreasing in numbers and educational attainments, we are facing a serious situation in the preclinical subjects. A still more critical condition confronts us in obtaining clinical teachers. Time after time we have tried to obtain eminent clinical teachers; the reply has frequently been: "Of course we should like to come with the University of Illinois, but where shall we work? Where are the patients?" It is quite like asking a man to come and teach anatomy and then explaining to him that he must provide a dissecting room and get the bodies for dissecting wherever he can find them. Since we possess no hospitals we are obliged to select clinical teachers, not only on the basis of their knowledge of medicine and ability to teach, but also on the basis of their being able to furnish patients for clinical study. These teachers have donated their services at great personal sacrifices and furnished patients for study sometimes in the face of strong opposition on the part of the hospital. Since the war these teachers have found it necessary to devote more time to practice not only to meet the present economic conditions but also to retrieve what was lost during the time they were in service. The time is fast approaching when we must pay them for the time given to teaching or dispense with their services.

Library, Laboratories and Class Rooms.—The library possesses about 25,000 volumes, and is one of the best medical libraries in the country.

It has, however, outgrown its quarters. The reading room is no longer adequate for the use of the students; scarcely a day passes but that students who wish to make use of it are turned away. Moreover, there is no longer stack room for the preservation of books. At present we are obliged to stop its further growth on account of inadequate space. The laboratories are well equipped with all the apparatus and accessories necessary for the highest grade of teaching and research, but they are poorly constructed, inadequately ventilated and lighted, and overcrowded and insanitary. The class rooms are not adequate for lecture and recitation work. Neither teachers nor advanced students engaged in investigative work can be provided with suitable rooms. This overcrowding has resulted from two changes which have taken place in recent years. The one is the greater emphasis which has been placed on laboratory work in Anatomy, Histology, Embryology, Physiology, Physiological Chemistry, Pharmacology, Toxicology, Bacteriology, and Pathology. This change has necessitated much more laboratory space, which could be secured only by taking away a certain number of lecture and recitation rooms. The other change has been the introduction of laboratory work in the first two years of the course in Dentistry. This laboratory work had to be taken over into the medical college on account of lack of space in the dental college.

In order to remedy these defects the university proposed to build a second laboratory annex to the old building and to build a fire-proof wing to care for the library. The expense of these two additions would approximate \$250,000. Their construction has been postponed pending certain other plans which will be referred to later.

The Dispensary and Hospitals.—The clinical resources in medical colleges comprise two principal agencies, viz: the Dispensary (Out-patient Department) and the Hospitals. Our dispensary gave advice and treatment during the past year to some 8,000 sick poor. Among these ambulatory patients were many who were of great interest to medical science, and some of these we have been able to care for and study in hospitals in which we have rented beds, but the greater number had to be refused hospital treatment.

While we have excellent equipment and able service it has been impossible to convert the basement of an old building, constructed primarily for storage purposes, into a sanitary dispensary. This insanitary condition has a bad effect on the student in that he leaves the medical college with a feeling that if the university can work under these conditions, he should not worry about sanitary quarters when he goes into private practice.

Hospitals.—The various standardizing agencies in medical education, such as the Council on Medical Education of the American Medical Association, the Association of American Medical Colleges, and the Federation of State Examining Boards, long have realized that the outstanding defect in medical colleges was the lack of clinical facilities. In order to overcome this defect, they have made educational and legal requirements such that the medical colleges are obliged to "own or entirely control a hospital. This hospital should be in close proximity to the college and have a daily average of not less than 200 patients who can be used for clinical teaching." The State of Illinois has a very similar legal requirement. The conditions above named were not fully met by the College of Medicine, and it became obvious in 1918 that we must comply more fully with these conditions or lose our "A" rating, and in addition run the chance of having our graduates refused recognition in our own state. The first efforts to meet these conditions were directed toward obtaining sufficient funds for the erection of hospitals, but year after year passed without success. The next move was toward the affiliation of hospitals under a definite contract, but in this our efforts were successful only in part. While a number of hospitals were willing to extend some teaching privileges, in none could we obtain "definite control". Failing in this, we decided to rent beds in different hospitals, but here another obstacle was encountered in that some hospitals, in order to protect themselves, could not permit any one to use these beds who was not a member of the hospital staff. It thus sometimes occurred that the dispensary physician who wished to place a patient in one of our rented beds, for further study, found that he must obtain a place on the hospital staff be-

fore he could work in the hospital. This condition frequently led to serious difficulties.

These and other obstacles which were encountered in our attempts to provide adequate clinical resources led to a firm conviction that the University must make a desperate effort to provide hospitals of its own, and failing in this, it had best discontinue its clinical work and concentrate its efforts on developing the first two years of medical study—believing that a good half-medical college would be far better than a poor whole one.

President James presented this situation to the last General Assembly, which promptly appropriated \$300,000 for a Clinical Building to be devoted to the investigation, treatment, and teaching of those diseases which belong in the fields of general medicine, surgery, obstetrics, and gynecology. This, of course, was but a beginning; provision must be made for teaching and investigation in the specialties, such as the eye, ear, nose, and throat; venereal diseases; tuberculosis; cancer; etc. There must also be provision for the study and treatment, as well as the education, of crippled and deformed children, for the study of child behavior, and for the study of the feeble-minded, the demented and insane.

The University had decided to go ahead with the construction of the first building of this group on the grounds adjoining the present School of Pharmacy when certain other ideas began to take shape which materially modified not only the plan to build additions to the old college building, but also the construction of its entire hospital group.

The Cooperative Plan.—The Director of the State Department of Public Welfare, upon entering the state service, was deeply impressed by the enormous sums expended in housing the sick, and the lack of any well defined effort to find out the causes of sickness. This impression is well expressed in his own words:

Upon entering the state service as director of public welfare in 1917, without knowledge of the subject, I found that the thing which most impressed me was the fact that the state was engaged in giving custodial care and incidental treatment to terminal cases, and was not doing anything worth while along the line of research, and had no ideas apparent upon the subject of preventive treatment.

It seems obvious enough that any activity, whether state or private, which spends one-fifth of its revenue

upon a single thing, should know something about that thing, and should spend a considerable sum for the purpose of ascertaining causes, with the idea of reducing the cost. Why hasn't the state conducted research for humans the same as it has for hogs? This has been a current question in Springfield for some time, and I think the answer is that research on hogs has been conducted by the University, whereas research on humans has been attempted by an administrative department which is not fitted to do so.

No definite ideas regarding preventive treatment occurred to us until we had reached the conclusion that research must first be undertaken by some competent agency; then it at once became apparent that research was not the function of an administrative organization.

The necessity for rebuilding the old and valuable Illinois Charitable Eye and Ear Infirmary caused department officials to study the subject of relocation, and it was promptly found that a proper location would be one adjacent to other medical institutions, for the reason that no particular type of medical service can stand by itself, and that all types of medical service are interlocked and need to cooperate.

At the same time, the department found itself charged with the duty of locating a Surgical Institute for Children, and as the department already knew that it needed adequate facilities for the study of insanity, mental defectiveness, and problems of behavior, it at once became evident that the best results could be achieved by placing all of these institutions in a group, because they all needed contact with skilled men, they all involved research and rehabilitation, and they all required dispensary service. Inasmuch as the administrative and dispensary service could be consolidated, the economy of handling them in group form was apparent.

In studying the organization for the group, it did not take long to discover that the department's greatest difficulty in performing high class service would be its inability to furnish trained personnel of the type needed.

As the University College of Medicine was also a creature of the state, organized for precisely the purposes required, we turned to them for assistance and found that they would need exactly the things which the department would have to offer, namely, hospitals.

When the University considered the proposed cooperation it realized that it could materially reinforce the special hospitals of the Department of Public Welfare by adding the Clinical Building, or general hospital, to the group. Moreover, it could at once acquire the use of the special hospitals which it had hoped to erect some time in the future.

The function of the University is preeminently education and investigation, and it could supply the laboratories, libraries, and medical skill needed by the Department of Public Welfare.

The Department of Public Welfare, on the other hand, was especially well qualified to undertake the construction and maintenance of the hospitals and institutes. It would thus relieve the University from the burden of looking after the administrative and clerical duties and would furnish funds for the upkeep which the University could scarcely hope to obtain.

These two state medical agencies, which had hitherto worked independently and in many respects duplicated each other's work, and whose present and future plans involved much greater duplication, saw that it would be highly advantageous for them to consolidate and differentiate. This consolidation not only would effect a great saving for each institution and consequently for the taxpayers of the State, but also would assure the public that the best medical and surgical skill would be available for the care of the sick poor of the State.

On the fifth day of July, 1919, the State Department of Public Welfare and the State University agreed to a plan of cooperation and differentiation with the following objects in view: to construct and maintain a group of hospitals and institutes in the medical center of Chicago where laboratories, libraries, and medical skill can be readily obtained; to provide medical treatment for the indigent sick of the State; to give young men and women a medical education and training such that they will become active soldiers in the warfare for the prevention as well as the cure of disease; to help practicing physicians of the State to keep in touch with the latest and best methods of preventing and curing human ailments; to tell the people of the State through special lectures and bulletins how to keep themselves physically efficient. The greatest object of all these is to find out and check the sources of the streams of human wreckage which are overflowing the hospitals, asylums, and prisons of the State.

The position of the University with reference to this plan of cooperation is well summarized by President Kinley in the following words:

The successful continuance of the State University College of Medicine is dependent upon adequate hospital, clinical facilities and laboratories. Unless the State wishes the University to abolish its College of Medicine it will have to provide these necessities, in any case. To provide them for the College of Medi-

cine while at the same time providing most of them in other locations would obviously be an unjustifiable expenditure of public money. Putting these buildings all together in proximity of medicine greatly reduces the expense.

Briefly then, the plan will provide the equivalent of a large endowment, adequate clinical facilities with fine equipment, adequate opportunities and facilities for medical investigation, and the highest efficiency in operation. It is important to emphasize this last point. The State would be obliged to continue to support a great public health organization if it had no State College of Medicine. Having a College of Medicine, it is under the necessity of making adequate provision for it. The two projects if conducted independently would necessitate in large measure a duplication of plant and facilities. The coordination and consolidation eliminates the expense of this duplication in buildings and in administrative and professional staffs. Moreover, the larger opportunities afforded to the members of the staff of the College of Medicine will be an attraction that should draw the best men in the profession, provided the State appropriates sufficient to the University to enable it to pay proper salaries to its medical professors.

To the people of the State this great project means, then, economy in expenditure, more adequate provision for the preservation of public health, more adequate care of the charges of the State in sickness, an extension of scientific medical knowledge that will increase still further our power to combat disease, and the placing of the State of Illinois in the forefront of the governments of the world in this field of public activity and inquiry.

To the practitioners of medicine in Illinois, as well indeed as in other states, this plan when perfected will give unequalled opportunities for further study and research. It should become the center for post graduate study for medical men to keep them in touch with the progress of their profession.

Medical students will find here in this perfected plan opportunities for ordinary medical study unsurpassed anywhere, and opportunities for advanced study and research which should in time be equal to those available anywhere else.

For some years past the University of Illinois has been studying the soils of the State in order to learn what they lack to yield the largest crops. It now proposes to study the health of the people of the State in order to find what is lacking to produce health conditions which will mean a longer average human life for its people. For years the University has been studying methods to enable the farmers to save their animals from death through disease. It now proposes to extend its studies to help save boys and girls for stronger manhood and womanhood.

Such an organization should be comprehensive enough to include all state supported medical agencies. It must cooperate with state and county medical societies. It must gather its materials and disseminate its results through the physicians. It must supplement

but not duplicate the work of the practitioner. It must cooperate with but not compete with the medical profession.

NOTE—The above article we feel confident is prompted by a desire on the part of the President of the University of Illinois and the Dean of the medical department to avoid the embarrassing situation in which the President of the University of Michigan finds himself because of the advocacy on the part of the medical staff of his institution of the plan of having the University Hospital (an eleemosynary institution) engage in the private practice of medicine in competition with the medical profession in the State of Michigan.

IS THE DOCTOR BETTER THAN HIS PATIENTS?

That highly esteemed journal, "*Literary Digest*," January 29, 1921, republishes from the "*Medical Review of Reviews*" an article entitled "Bad Patients Make Bad Doctors." The article would seem to make the doctor the scapegoat for the faults and follies of the patient and then by way of consolation to absolve the doctor from any ethical lapse by making the patient the scapegoat for the physician.

Medicine, the ministry and the law are listed among the ancient, honorable and learned professions. Time was when the counsels of these three essential factors in civilization governed the rulers and the ruled. Physician, priest and judge were crowned by faith. From primitive, deep-seated belief in these three guides and arbiters of daily life and community conduct, it must be confessed the people have drifted away. Their trust has ceased to be implicit. A few pessimists go further. This last named group is even ready to rush into print and to intimate that decadence of the populace has spread to its healers and counsellors and that patients are "bad" and as a direct consequence, "so are the doctors."

Is this true?

Undoubtedly there are physicians who are not up to the standard in their relation to the ideals and tenets of the profession. The same charge would be proven easily about some member of the bar, and even the clergy are not free from black sheep. Still the percentage is so very slight

in each instance that instead of crying aloud and calling "cancer," it would appear to the well balanced mind that the blemish is more of a freckle than akin to the terrible diagnosis set forth.

For every physician who tampers with his ideals for the sake of fixing up his bank account a careful canvass of the situation will find thousands who don't. And that too, in the face of the fact that a physician is not an endowed institution but a mere man who has to purchase his coal at market rates and buys his butter and eggs without any professional discount.

This seeming lack of faith in men of medicine, men of law and men of the cloth is due largely to the germ of unrest biting very hard, very persistently and very ubiquitously since the outbreak of the world war.

Readjustment crises have acted as fertilizers upon this spirit of revolt. Change at any price and with any result is the universal cry. It would be abnormal if some of the backwash did not hit at the integrity of the medical profession. And be it said to the comfort of every doctor in every land that the best evidence of the sterling constituency of our craft is that so few fall.

Justice deflected or miscarried has begotten the current curse of bolshevism to add to the normal criminal strata and to cut the hold of the law. Human weakness, false prophets and hope deferred cleave a man's mind from the spiritual and the infinite.

What are the causes for the chasm that threatens between the doctor and his patient? What is responsible for the growth of that wide, infrequently expressed, deeply felt sentiment among a proportion of the people that doctors and lawyers require constant watching? That "an eye should be kept on the minister." That, as with liberty, "eternal vigilance is the watchword?"

The effect of the world's hysterical debauch is felt even here. Changing conditions all about have effected a new relation between physician and patient. And once the doctor occupied a beloved and endearing place in the hearts and homes of the citizenry! Even the aborigines kept a warm spot in the wigwam for the medicine man.

Epitomized roughly the destruction of absolute

belief in the doctor by the patient arises from these three main causes:

1. The nature of the work of the physician;
2. The character of the patient.
3. The character of the doctor.

These three powerful, primitive causes in the very nature of the human constitution have been, are now and will be always busied in undermining the standing, reputation, honor and confidence that ought to be due to the medical profession. The clergyman is called to comfort in the solemn hour when worlds are to be exchanged. Fear and gratitude of the universal worshipping heart have given the clergy the first place among men. The doctor is summoned hastily into the thickening shadows of the chamber of sickness. Instead of teaching resignation to destiny it is the task of the physician to fight fate and the elements of two worlds. True, for the time being at least, the profoundest gratitude of the heart is granted the physician when with his skill and power he achieves final success and wards off the king of terrors from one beloved. The link between the two professions is tighter than many of the laity dare to dream. Each demands its element of consecration. And each, too, has had its renegades. History and experience record members of the clergy who have played the recreant with their sacred trust. We have all known physicians who give sham and falsehood for the gold of their confiding patients. Yet so long as men believe that earth is not all; so long as love and friendship continue to loop their golden cords about the companions of time to keep them here, just so long, because of the inherent nature of his work, will the man of God serving at his altar, and the man of medicine attendant at the bed of illness continue to receive the admiration and the best gifts at the command of worshipping mortal men.

For this ideal even the weakest doctors struggle in their inner hearts; most of all those who are the victims of environment. To deny the existence of any physicians who are the victims of environment would be foolish. Fraud will retain a fee or compel honesty in her own defense to pay it. A community's vicious element hires a doctor from necessity rather than from generosity or gratitude. The office of a physician will be locked only when the evil of the human

heart is eradicated, all the wrongs of society are righted, and disease no longer exists.

So long as men sin there will be physical consequences. So long as convention holds, men will seek to evade both the public and private sequelae of these sins. "Self-preservation is the first law of nature." Against this, in the minds of the laity what brooks a physician's ideals or the fineness of professional ethics?

A physician's tasks devolve upon him. The privilege of selection is not his. That is the right of the patient. It is the patient who gives the physician employment, pay and above all the nature of the work that the physician must perform. To the doctor the field is the world as he finds it. He learns quickly enough that though immortality and criminology pay their servants, the emolument is without honor. In her heart ignorance carries suspicions and never honor for her medical men.

The character of the patient and the nature of his ailments determine the character of the doctor. The patient makes the doctor, not the doctor the patient. Let this be understood thoroughly. There is a prevalent disposition on the part of the patient to avail himself of the services of a doctor to escape from punishment or as an aid in wrongdoing. Consider, too, the ingratitude and the suspicion of the ignorant and base patient and the unprofessional conduct of some physicians. All these combine to establish the public estimate of the medical profession.

The doctors will stay on the level of the people. As a citizenry rises or falls in moral tone, so will the physician. The medical thermometer indicates the moral temperature of the people. In a nutshell, there are the historic and philosophic elements out of which are formed the character of a doctor. Public opinion maintains the folly of expecting a creature to be better than its creator. No one has a right either to expect a doctor to be better than the patient.

I have conceded enough to explain the unfortunate reputation of some doctors. Candor requires no further admission. And yet the truth is to be found only in the converse of the demonstration. The bulk of physicians die in poverty and pride.

On this occasion or anywhere we lay down this proposition, the philosophy of which we may not pause to state, though apparently not deduced

from the principles of philosophy, but the truth of which we do not hesitate to affirm, "the medical profession is better than its patients." The doctor is more under the sway of reason and conscience than is the patient. It must be so. The physician finds himself in the protean role of judge, bailiff, jailer, jury and executioner.

Objection may be taken also to the frequent comment: "It's easy for the doctor to be generous and fair and highbrow moral—he has little at stake and the patient much." Now the patient and the public alike guess little of how much the physician has at stake. A doctor has mortal appetites and human responsibilities. Let it be repeated that the profession is not endowed nor divinely sustained. Often for honor's sake, the physician faces an empty cupboard and not for himself alone. Let an instance be cited:

An ethical physician in Chicago whose business judgment swung in inverse ratio to his medical skill found himself practically bankrupt. His wife and their little family were beginning to feel the clutch of poverty. One child was attending a technical school with tuition unpaid. A brilliant daughter dearer to her father's heart than his life blood lacked decent apparel, and he was having a terrible time to get together the money with which to pay the premium on his life insurance. In the depths of the doctor's discouragement, a rich patient, practically the mainstay of the family, approached the doctor with a glittering offer. The service was an operation—illegal. The fee would have been very large. The money proffered would tide him over. It meant miracles in that little home. And it meant, too, a forfeiture of the doctor's self-respect. For a brief time this physician pondered in silence. Emotion struggled in his breast. Then we saw him rise in the majesty of his moral right. He gave his answer briefly and he lost the patient then and there and for always. For the doctor replied:

"I need your money. For my family I would sacrifice my life but I will not return to them robbed of my honor and my manhood even if my hands were heaped with gold."

That doctor in his resolution is not alone either in Chicago or elsewhere. He has hundreds and thousands of moral medical contemporaries. Take a pencil and paper. Present it to the superintendent of any hospital in this country and he will write down the names of

many men practicing in this or any other community who are as pure as gold tried in the fire, "Bad patients make bad doctors," eh? It is not true. Not only is the "doctor better than his patient," but with the right sort of man, *bad* patients make *good* doctors, just as fire burns out dross. It takes temptation to prove the spirit. And what are the annals of the profession? Medical history is filled with the names of great practitioners whose moral standards are the foundation stones upon which have been builded the moral integrity of the country. Now and through all times shall be read the matchless integrity of American doctors pleading for the right against the wrong.

On great moral issues involving individual rights the medical profession has been the pioneer, far in advance in time and tone, even of the church. More than Pope, or bishop, minister, circuit rider, evangelist, or Salvation Army captain, the medical champions come in contact with men through the working days of all the years. And so they have wrought out these principles which gave that rich meaning to life in the early years of the twentieth century. Unfortunately the medical profession must court and possess a paid constituency. But the charm for highborn souls is that the path to vital medical distinction lies not in the lowlands of deceit but runs along mental heights to the rarefied ozone of truth itself, under beckoning skies of loftiest purpose. It would seem as if the concourse of the people might stay awhile with the old gods rather than to bend in worship before new gods that are false. Tradition is not always wrong.

The mission of the doctor finished? It has only begun. Cruel, titanic forces are manifesting themselves today in the economic, medical, social, and industrial world. These are sufficient to crush the individual under former conditions and may nearly do so under the current stress.

Yet in some way unglimped in this hour before the dawn, the individual shall not perish. Close in the future impends an irresistible conflict. For this clash, time is preparing leaders. When the hour falls those who command will be the men and women with intellects trained to distinguish between the finest shades of right and wrong, and skilled to repel the wrong with prompt response and lightning speed. These men and women with brains equipped thus

potently, who are inspired and warmed with unselfish zeal shall utilize the dominant and now threatening physical and spritual forces of earth to the best development and the glory and happiness of mankind.

All worlds are ruled by law and justice. Without law and justice nothing worth while can exist. Those men and women who set themselves apart for a severe study of moral right and for its conscientious leadership stand in the royal line. Upon their shoulders shall rest the government of the future.

IS THE REGULAR PROFESSION TO BE ANNIHILATED?

THE PUBLIC MUST BE EDUCATED TO THE DANGERS OF SOCIALIZED MEDICINE

No doubt the present condition of affairs is due to the activity as well as stupidity of the members of the medical profession who have avoided any effort to educate the public as to the viciousness of much of the proposed legislation and the baneful effects such legislation will have on the public if enacted.

At present we are confronted with not only the possibility but the probability of seeing the regular medical profession, as a profession, annihilated. The worst feature of the whole business is that we have a few sapheads in the medical profession, and more connected with our institutions of learning, not omitting medical colleges, who are secretly or openly aiding in the downfall of the profession.

The time has arrived when we have to go to the public with the facts. This can be most effectively done through regular medical organizations assisted by guilds made up of dentists, doctors and druggists whose interests are allied with the medical profession. This scheme has worked out beautifully in New York. In Illinois (see ILLINOIS MEDICAL JOURNAL, November, 1920) a plan of campaign of education has been established with a central headquarters. From here the data is to be sent to district chairmen who in turn relay the information by phone, letter or otherwise for transmission to the rank and file who, in turn, communicate it to their patients and friends, the voting public in their homes and on the street, in public halls and in the press, by exhortation and in debate. The people who have the votes will know what we

think of this legislation or that, whether constructive or destructive of public health and personal well being and will *vote accordingly* without regard to party affiliations and the legislators and their political advisers or leaders will stop, in the interests of their party solidarity, before they dare put over such vicious measures as compulsory health insurance, medical practice, re-registration acts, state medicine bills, chiropractic, drugless therapy bills, or measures looking to the national socialization of medicine at the dictation of the false doctrinaires, the herr professors, the professional philanthropists, the busy-body social surveyors who are the high priests of the "worshippers at the shrine of something else than Americanism" and who constitute the "something for nothing lads" who seek to set apart the American working men as a separate and dependent class and destroy their self-reliance and self-respect by establishing control over their most sacred functions, the care of the health and welfare of those they love by the subordination of their agencies of healing to the purposes of these forces of unrest and the conversion of their medical men into piece working practitioners under the domination of politically appointed, mediocre, unscientific vote-getters who are M. D.'s but not doctors in the sense that the people wish to regard their doctors—as lovers and servants of them and theirs.

WHEN THEY GO OUT TO MAKE LAWS FOR THE DOCTOR OR THE FARMERS, LORD HELP THE BENEFICIARY

NO SIR, GOT TO GO OUTSIDE OF MICHIGAN TO
GET MEN GOOD ENOUGH TO DOCTOR RICH
FOLKS FOR BIG FEES

By way of the closed hospital controversy between the doctors of the State and the medical department of the University of Michigan we submit the following from a Michigan physician printed in the *Journal of the Michigan State Medical Society*, March, 1921.

To The Editor—No Sir, not for publication, just to tell you what folks think way back here in the jack pines.

When they go out to make laws for the doctor or the farmer, Lord help the beneficiary.

Every move for medical legislation ties a new hay wire around the physician.

The charlatan has ten times the privilege right in Grand Rapids that the regular physician enjoys.

None of the faddists have to pay out big money

for antitoxin. They are not liable for defective work. They get the velvet.

Let us have a law to furnish them antitoxin. There are plenty of good physicians soft enough to catch them how to use it.

And now for state medicine. Divide up the territory to suit the politicians.

In fact we can dispense with the physician entirely. Make it a political job, instructions from Lansing.

If a man don't believe in state medicine he is a socialist or maybe, if that don't fetch him, a bolshevist.

Of course socialism is too paternalistic. Self determination is a big word, but it should not apply to a citizen's right to choose a doctor, nor to a doctor's right to choose his line of treatment.

It is too bad the doctors—small d now—are not organized. Gee, what made all those fellows come down to Ann Arbor? Bet they wanted one of those ten thousand dollar jobs. No Sir, got to go outside of Michigan to get men good enough to doctor rich folks for big fees. One could have said to Dr. Burton: "In this room are some of the best physicians in America, yet some of these able and skillful practitioners have acquired their knowledge, their skill and their humane methods working upon poor patients."

"Learning the difference between the treatment of the rich and the treatment of the poor" ought to be an argument for the advocates of state medicine, or is it the beginning of it?

Any way, Dr. Burton told you when it was train time.

R. H. W.

MEDICAL BILLS IN THE PRESENT ILLINOIS LEGISLATURE

Senate Bills Nos. 10 and 134. Maternity Bills. Introduced by Glackin.

House Bill No. 217. Cosmeticians Bill. Introduced by Mr. Krump.

H. B. No. 236. Chiropody Bill. Introduced by Mr. Bippus.

S. B. No. 1.—H. B. No. 17. Exempting Optometrists from Jury Service.

H. B. No. 65. Dental Hygiene Bill. Introduced by Mr. Baldwin.

H. B. No. 373. Osteopathic. Introduced by Mr. McCabe.

H. B. No. 194. Dental Surgery. Introduced by Mr. Vice.

H. B. No. 243. Permitting Foreign Doctors to Practice Without Examination. Introduced by Mr. Geisler.

H. B. No. 249. Compensation for Accidental Injuries. Introduced by Mr. McCabe.

H. B. No. 283. Taking Supervision of licenses from Department of Education and Registration and Placing Same in County Court. Introduced by Mr. Stubbles.

S. B. No. 12. Salary to Be Paid Secretary of T. B. Sanitarium. Introduced by Mr. Glackin.

S. B. No. 187. Relation to County Health Commissioners. Introduced by Mr. Wheeler.

S. B. No. 223. Protection of Maternity and Infancy. Introduced by Mr. Glackin.

H. B. 344. Relation to County Health Commissioners. Introduced by Mr. Sonneman.

OBJECTIONS TO THE CHIROPODY BILL

House Bill No. 236. Introduced by Mr. Bippus, February 24, 1921. Referred to Committee on License and Miscellany.

Sec. 2. Definition of "Chiropody"—The local medical, mechanical or surgical treatment of ailments of the human foot and *hand* except the use of *general anesthesia*. A very short bill—in fact only 3 lines of real meat, but real "meat" it is, as the treatment of all ailments of the hands and feet, both medical and *surgical*, are covered, provided only that *general anesthesia* is not employed. By using local anesthesia Chiropodists would be within this law if they did amputation of the feet for disease or injury or for any other reason.

OBJECTIONS TO COSMETICIANS BILL

House Bill No. 217. Introduced by Mr. Krump, February 23, 1921. Referred to Committee on License and Miscellany.

This bill would license grammar school graduates 18 years of age, after four months of school of cosmetic therapy—to do—"systematic stroking, slapping, kneading, tapping or manipulation of the face, scalp, neck, shoulders, hands or feet, or the use of electricity on the face, scalp, neck, shoulders, hands or feet, or the removal for cosmetic therapeutical purposes of warts, moles, growths of superfluous hair by means of the electric needle or high frequency currents.

This bill provides for annual re-registration of cosmeticians in language strangely familiar. One can almost suspect that Fred Dodds is still running things—still planning re-registration for everything the Department of Registration has supervision over. Some day when the physicians are not suspecting anything—which, of course, is about all the time—re-registration will be slipped over on us.

This bill, of course, is but another attempt to get the practice of medicine into uneducated, unqualified hands. Tinkering with warts and moles is often the forerunner of cancer and should not be allowed.

IF ANY CHANGES IN THE MEDICAL PRACTICE ACT ARE MADE, THE FOLLOWING SHOULD BE ONE OF THEM

A BILL

For an Act to amend Sections 2 and 20 of "An Act to revise the law in relation to the practice of of the art of treating human ailments," approved June 25, 1917, in force July 1, 1917.

Be it enacted by the People of the State of Illinois, represented in the General Assembly:

Section 1. Sections 2 and 20 of "An Act to revise the law in relation to the practice of the art of treat-

ing human ailments," approved June 25, 1917, in force July 1, 1917, are amended to read as follows:

Sec. 2. No person shall practice medicine and surgery or any of the branches thereof, or any system or method of treating human ailments without the use of drugs or medicines and without operative surgery or midwifery, *whether with or without pay*, without a license so to do, *nor shall any person accept reward or hold himself or herself out for reward to treat bodily or mental human ailments or defects or disabilities by faith healing, laying on of hands, prayer or mental suggestion, for compensation or for money or anything of value, directly or indirectly accepted or received, or for any reward promised or paid, without a license to treat human ailments.*

Sec. 20. Any person shall be regarded as practicing medicine or treating human ailments within the meaning of this Act, who shall treat or profess to treat, operate on, or prescribe for any physical ailment or any physical injury to or deformity of another. This section shall not be construed to affect the following cases:

(1) The administration of domestic or family remedies in cases of emergency;

(2) The practice of dentistry or dental surgery by any legally licensed dentist exclusively engaged in practicing dentistry or dental surgery;

(3) The practice of pharmacy by any legally registered pharmacist, registered assistant pharmacist or registered local pharmacist exclusively engaged in practicing pharmacy;

(4) The practice of medicine and surgery by any surgeon of the United States army, navy, or public health service, in the discharge of his official duties;

(5) The treatment of the sick or suffering by mental or spiritual means without *surgical intervention and without the use of any drug or material remedy when done without reward or compensation or expectation of reward or compensation*;

(6) The practice of optometry by any legally licensed optometrist, exclusively engaged in practicing optometry.

AN AMENDMENT TO THE MEDICAL PRACTICE ACT THAT SHOULD BE ON THE STATUTE BOOKS

A BILL

For an Act to add Section 42a to Division I of "An Act to revise the law in relation to criminal jurisprudence," approved March 27, 1874, in force July 1, 1874, as amended.

Be it enacted by the People of the State of Illinois, represented in the General Assembly:

Section 1. Section 42a is added to Division I of "An Act to revise the law in relation to criminal jurisprudence," approved March 27, 1874, in force July 1, 1874, as amended, the added section to read as follows:

Sec. 42a. *Whoever willfully refuses, neglects or fails to provide necessary medical care for any minor whom he or she is under a legal obligation to support, or who is under his or her guardianship, or in his or*

her custody, shall, if such minor dies as a result of such refusal, neglect or failure, be guilty of manslaughter; and if in such case, such refusal, neglect or failure was with malice aforethought, such parent, guardian or custodian shall be guilty of murder. In all other cases where any parent, guardian or custodian of any minor refuses, neglects or fails to provide necessary medical care for such minor, such parent, guardian or custodian shall be fined not exceeding five hundred dollars (\$500.00), or imprisoned in the county jail not exceeding six months, or both.

Note: This proposed amendment should meet the approval of every one who loves children.

THE MATERNITY BILL AND OBJECTIONS THERETO

We publish in full Senate Bill No. 134 which, together with Senate Bills Nos. 10 and 223, bearing on the same subject, are now before the Illinois legislature. Criticisms of Senate Bill No. 134 follows the publication of same; likewise, a general criticism of maternity legislation throughout the United States. The Bill:

52d G. A. SENATE BILL NO. 134 1921

Introduced by Mr. Glackin, March 4, 1921.

Read by title, ordered printed and referred to Committee on Appropriations.

A BILL

For an Act in relation to the protection of maternity and infancy.

Section 1. *Be it enacted by the People of the State of Illinois, represented in the General Assembly:* The State of Illinois hereby accepts all of the provisions and benefits of an Act of Congress, entitled, "An Act for the Public Protection of Maternity and Infancy and providing a method of co-operation between the Government of the United States and the Several States," hereinafter referred to as the Federal Maternity and Infancy Act.

Sec. 2. There is hereby established the Board of Maternal and Infant Hygiene to consist of the Director of Public Health, the Assistant Director of Public Health and the Superintendent of Public Instruction. The Director of Public Health shall be the chairman and executive officer of this board. The Director of Public Health, the Assistant Director of Public Health, and the Superintendent of Public Instruction shall serve as members of the Board of Maternal and Infant Hygiene during the respective terms of office for which they have been appointed or elected.

Sec. 3. The members of the Board of Maternal and Infant Hygiene shall serve without compensation, but they shall be reimbursed for their actual and necessary expenses incurred in the discharge of duties under the provisions of this Act.

Sec. 4. It shall be the duty of the Board of Maternal and Infant Hygiene:

(a) To co-operate with the Federal Board of Maternal and Infant Hygiene in the administration of the provisions of the Federal Maternity and Infancy

Act to the extent and in the manner provided in that Act;

(b) To appoint, when required so to do by the Federal Board of Maternal and Infant Hygiene, advisory committees, both State and local, to assist in carrying out the provisions of this Act, at least half of the members on any committee so appointed to be women;

(c) To submit to the Federal Board of Maternity and Infant Hygiene a plan showing the provisions to be made in the State for instruction in the hygiene of maternity and infancy through public-health nurses, consultation centers, and other suitable methods and the provisions to be made for medical and nursing care of mothers and infants at home or at hospitals; and to make such reports and submit such other plans to the Federal Board of Maternal and Infant Hygiene as may be required by law or by the rules and regulations of the Federal Board;

(d) To arrange with the University of Illinois, the State Normal Universities and other public educational institutions for extension courses to be given by qualified lecturers, in order to provide popular, non-technical instruction on the hygiene of maternity and infancy and related subjects; and

(e) To report in writing to the Governor, annually on or before the first of December, and at such other times and in such manner and upon such subjects as the Governor may require. The annual report shall contain (1) a statement of the existing conditions in the State with regard to maternal and infant hygiene; (2) a statement of suggestions and recommendations with reference to instruction in maternal and infant hygiene and with reference to providing medical and nursing care for mothers and infants; and (3) an itemized statement of the amounts of money received from Federal, State and other sources, and of the objects and purposes to which the respective items of these several amounts have been devoted.

Sec. 5. The Board of Maternal and Infant Hygiene may appoint without reference to any civil service law which is now or which hereafter may be in force in this State, such technical assistants, clerks, stenographers and other assistants as may be necessary and prescribe their duties, compensation and terms of employment.

Sec. 6. The State Treasurer shall act as custodian of all money allotted to the State under the provisions of the Federal Maternity and Infancy Act. This money shall be paid out by the State Treasurer only upon vouchers certified as correct by the chairman of the Board of Maternal and Infant Hygiene and approved by the Department of Finance.

Sec. 7. There is appropriated to the Board of Maternal and Infant Hygiene, for the purpose of carrying out the provisions and purposes of this Act, the sum of twenty-five thousand dollars (\$25,000). The Auditor of Public Accounts is authorized to draw warrants upon the State Treasurer against this appropriation upon vouchers certified as correct by

the chairman of the Board of Maternal and Infant Hygiene and approved by the Department of Finance.

CRITICISMS OF SENATE BILL NO. 134

Just plain disgusting and humiliating for any citizen of Illinois to contemplate. In 1861 it took a war between factions to determine the sanctity of State rights and, even then, the issue was clouded by the sentiment of anti-slavery. In 1921 men elected by the people to represent them and safeguard their rights go out of their way, in Illinois, to make their State a rubber stamp for a federal department through a species of "co-operationism" which Dr. Harris of Delhousie University invests with an alias—"Socialism in Eccelsis."

Section IV, line 6 sqq.: They will supinely "appoint, when required to do so by the Federal Board of Maternal and Infant Hygiene," advisory committees, etc.

Section IV, line 16, sight-unseen they bind our citizens to "Rules and regulations of the Federal Board."

Sec. IV, line 18 sqq.: "Popular, non-technical instruction on the hygiene of maternity and infancy and Related subjects," according to Margaret Sanger and her well-financed Birth Control League, includes teaching the 16 year old daughters of our citizens the value of condiums and "Veils" and douches as an aid to love—for these we shall have the University of Illinois and the State Normal University.

Sec. V, line 3: What are "technical assistants"? Doctors and nurses and specialists in obstetrics and abortion? What else of a technical nature is there under the head of Maternity and Infancy?

Sec. VII, line 3: "\$25,000 "to carry out the provisions of this Act." Verily, verily, an initial appropriation is a latchkey for a deficit door of the State treasury which, in the course of a few years, will be running into millions and milions for the deficit.

The scheme is not only State Medicine *Maternity Centers* but it is the absolute surrender by the State of its own dignity and power to a BOARD—a sub-agent of a sub-agent of the people who are supposed to be the State.

GENERAL COMMENT ON MATERNITY LEGISLATION

Senate Bills Nos. 10, 134 and 223, are intended for co-operation with the Shepard-Towner Bill before the last U. S. Congress, where it was defeated.

A bill similar to S. B. 134, before the Massachusetts legislature in 1920 was defeated, and the same bill and another bill of a similar nature were introduced in the 1921 legislature in Massachusetts and both bills have been turned down by the present Massachusetts legislature.

The National Bill for the public protection of Maternity and Infancy, through co-operation between Federal and State Governments, carries an annual appropriation of \$1,480,000. Of this, \$480,000 is to be

apportioned equally to the States, and the remaining \$1,000,000 will be apportioned in the proportion which the population of each State bears to the population of the United States. In order to obtain its share of the money appropriation a State may create or designate an agency which shall have power to co-operate with the National Children's Bureau in the administration of the act. The Children's Bureau has the authority to recommend the appointment of Advisory Committees, State and local. Provision is made for extension courses in the hygiene of infancy and maternity in connection with State universities. Not more than 25 per cent. of the amount granted to a State may be used for this purpose. It is further provided that no payment out of the appropriation of \$1,000,000 shall be made to any State until the legislature of that State has provided an equal amount from the State Treasury.

The appropriations in that bill practically bribe every State to plunge hastily into a new experiment, with ever-expanding costs, that is almost communistic and fatal to Americanism. Radical State laws are possible from hasty action.

While 35 governors in May, 1920, endorsed the bill, yet at the December hearing, letters from only 8 governors were presented, showing the wave had receded. The Governor of Washington wrote: "I cannot possibly indorse the scheme."

It should be emphasized and remembered that the Shepard-Towner Bill before the last National Congress held out to the several State legislatures the glittering bait of hundreds of thousands of dollars if they shall initiate legislation carrying equal amounts of appropriations. A very tempting bait and under such circumstances there lies the likelihood and danger of hasty, ill-formed or radical measures being enacted in legislative sessions on new subjects about which few persons understand much if anything. Jokers may be inserted and errors creep into bills so framed that may do the State harm. Besides women are subject to whatever laws are made.

Governmental Maternity Benefit Bill is dangerous.

In only one-half of 1 per cent. of all births is there any mortality of the mothers. The New York City Health Department says "much of this mortality is associated with criminal abortion." Shall millions be spent to save such criminals? Maternity Benefits cannot, in the few days of nativity, offset the errors of a lifetime.

Only force by the government can compel mothers to obey scientific laws. Yet, what man wants the government to control his wife?

The Shepard-Towner Bill, of which this bill is the State unit, is said to be non-compulsory. It starts the machinery. It opens the door to the enactment of compulsory measures by the States. Prussia and Russia have compulsory laws and woman is degraded in Russia.

Many women fear what may result from the government getting its hand on women during the time of their dependency. Many national societies this year have refused to endorse government maternity.

The General Federation of Women's Clubs, National Grange, I. O. O. F., Catholic Women, W. C. T. U. and others of note.

The Fall River *News*, Mass., points out that men interested on the financial side are financing the propaganda.

The statistical arguments advanced for maternity legislation give a wrong impression. Our people are heterogeneous, while the smaller countries to which the United States is compared are homogeneous. Considering that the United States, through private initiative, is doing obstetrical service for the mothers of the world, our mortality of mothers and babes is wonderfully low. Lower in some cities than anywhere on earth. New Zealand is one of these homogeneous nations, but maternity is not socialized there.

MATERNITY LEGISLATION IS PATERNALISTIC AND SOCIALISTIC

Maternity legislation is paternalism, communism, sovietism, and all the isms of the kind condensed into one.

"It is the entering wedge for all the various forms of compulsory insurance, such as Health, Old Age, Sickness, etc.

"It is the camel's head in the tent, soon to be followed by the rest of the camel.

"It makes the white man the equal of the Indian, a ward of the State.

"The State has as much right to pay one's grocery bill as to pay that under discussion."

Public spirited women who seek the welfare of our home should consider the following special dispatch to the Fitchburg, Mass., *Sentinel* of December 21, 1920:

There is danger lest the Maternity reform will yet succeed in placing American mothers and their children under departments of governments, where cattle are placed, and, in some respect, for the same purposes.

The cattlization of the women of the State is a dreadful thing to contemplate, in view of the failure of the government control of airplane construction, ship building and railroads. An appeal is made to exert all proper influence to save our homes, mothers and children from coming under the control of bureaucrats at Washington and elsewhere.

MATERNITY LEGISLATION A BUSINESS SCHEME

The Massachusetts Civic Alliance, a non-partisan organization solely for the public good, views with misgivings the various socialistic movements. In a Brochure published and circulated broadcast in their attempt to head off maternity legislation in Massachusetts it says:

Whatever else may be brought under government ownership and control the American home should never become socialized.

It views with misgivings the various socialistic movements and says: Bills for federal and state maternity aid in childbearing have been recommended by various societies and public officials. But the movement has worked up through the expenditure of thousands of dollars. We quote the Brochure further:

Corporation legislation is often just, sometimes unjust. The Cambridge Subway Deal at last November's Special Session cost Massachusetts taxpayers \$8,000,000 for 50 years. But the Maternity Innovation, at next November's Special Session, may cost Massachusetts taxpayers from \$100,000,000 to \$200,000,000 in the next 50 years. Do you want this in your State?

U. S. Senate Bill 3259, which was defeated recently in the U. S. Congress, provides for Federal aid to the States in providing public money from the National treasury and a method of co-operation between the United States and the States in supplying medical, hospital, nursing and obstetrical care at childbearing. As there are $2\frac{1}{2}$ million births annually in the United States the ultimate cost to taxpayers will be enormous, possibly \$100,000,000 every year.

In the Massachusetts legislature on June 3, 1920, the vote was 140 against, to only 20 for the Maternity bills.

The enclosed circulars tend to expose some of the faults of the scheme. But there is another grave objection. It would be a fraud upon taxpayers to make them pull the chestnuts out of the fire for life and health insurance. If they take risks and spend money employing nurses to attend at the sick bed-sides of their policyholders, they do this as a business proposition. Let them pay their own business bills.

Therefore, it may as well be asked plainly if Maternity measures ought to be enacted while heavily financed from secret sources and which would be of great financial advantage to those who insure many of the mothers and children of the nation, and when infant mortality in eight years has declined from 131 to 101 per 1,000 births? State control is likely to increase mortality.

MASSACHUSETTS CIVIC ALLIANCE,
Eben W. Burnstead, Secretary.

MATERNITY BENEFITS NOT A PANACEA OR CURE-ALL

Bills for Maternity Benefits come from an erroneous idea in the minds of some people, based upon questionable statistics, that the health of the American nation has gone far below the universal standard, and that prenatal and postnatal care is the sole panacea for all our evils.

We are tired of social reforms which are constantly being foisted upon us to cure us of what ails us when nothing at all out of the ordinary is the matter.

If the proponents are really in earnest in their endeavors to better the human race, the expectant mother and offspring, we would suggest that they devote the same amount of energy in advocating more religion, better morals, better habits, better protection by right dressing, better living and working conditions, less dancing, less theaters, more fresh air, less burning of the midnight oil, and many other things are too numerous to mention. The results obtained would throw into insignificance the prenatal and postnatal proposition.

CAUSE IS MORAL AND SOCIAL

We contend that the true cause lies in our moral and social conditions. We were created right, but

have not kept ourselves right. Bad habits, wrong living, and, we might add, heredity, have brought about the physical defects which are giving the present small fatal results to childbirth.

The moral conditions in this country, as well as elsewhere, are deplorable. Ministers of all denominations are appalled at the lack of morality. Venereal diseases are affecting the health of manhood and womanhood.

Low conditions of immorality open the gates to all kinds of imperfections in social conditions. When morality is lacking, there is nothing to check the tendencies to follow fashion, regardless of the effect on health. These tendencies are seen in the ill-fitting corsets, which cramp the abdominal organs and push them out of relation, causing undevelopment and displacements; in the high heels, causing all kinds of orthopedic defects, as well as other defects due to posture, and in dresses that expose to the weather.

In addition, the tendency is toward pleasure-madness, which turns night into day, depriving future mothers of the fresh air, rest and sleep needed to renew expended energy lost in the toil of the day.

RESULTS

The result of all this is to lower the general health and powers of resistance. Girls arrive at the stage of motherhood weak, enemic, ill-nourished, nerve-wrecked, deformed, and utterly unfit to bear children. Woman cannot give to her child that which she has not. If she has good health, she may transmit good health. If she has good physique, she may transmit good physique. If she has not these, she will give the opposite.

Heredity plays an important part, and physical imperfections are handed down from generations, *which cannot be changed by prenatal and postnatal care. Physical conditions today are found in pregnancy that are hereditary as much as is epilepsy.*

State Maternity Benefits will not prevent deaths or expectant mothers who have been made unfit by immorality, social excesses or heredity, and who constitute the great part of the half of 1 per cent of mothers who die from childbirth causes.

Finally, we claim that existing agencies are saving lives of mothers and babies better than ever before, and the laws which exist cover the ground and need only to be worked out and enforced to their fullest possibilities.

We suggest one potent factor, and that is the proper education of the people to the correct habits of living.

To go farther than this is to invade the realm of private rights, personal liberties and constitutional safeguards.

FROM WHENCE COMES THE DEMAND FOR MATERNITY AID

To properly administer prenatal and postnatal care under state control, it would be necessary to establish a department and sub-departments with high salaried officers and sub-officers, hence we can understand why reformers are agitating this scheme.

It is not the women with large families, the real producers, who are seeking it. On the contrary

it is the childless or unmarried women, who, instead of reproducing, feel that they must devote all their time and energy to their poor unfortunate sisters, sisters who are "doing their bit" to increase the number of American citizens.

The agitation from maternity benefits comes from an erroneous idea in the minds of some people, based upon inaccurate statistics, that the health of the American nation has dropped below the universal standard, and that prenatal and postnatal care is the sole panacea for all evils.

THESE BILLS ARE NOT WHOLLY HEALTH MEASURES

We are told that maternity legislation is a health measure. That this legislation, if passed, will reduce defective population, and lessen the need for State care of the Insane, the Half-Witted, the Indigent, the Tubercular, the Blind, the Alcoholic, the Criminal, the Drug-ridden and all the others of the fifty-seven varieties. What a dream!

Do the proponents of these bills plan to undo by prenatal and postnatal care what has been brought upon us by years and years of wrong living? It is well to seek remedies for the above evils, but it is ridiculous to say that prenatal and postnatal care is the cure.

STATE MATERNITY A FAILURE

Australia has prenatal and postnatal care and it is admitted a failure.

Germany, with her prenatal and postnatal laws, and all her other social laws, did not produce a super-man. She did produce a machine-man, a man State controlled. The State looked after the pedigree of his birth, controlled his education, regulated his habits, suggested his thoughts, etc., but he had no individuality.

His health was not superior. While the German machine was winning, the German super-man was at his best. When the machine began to lose, the super-man went to pieces. Having no individuality of his own, he had cultivated no thoughts of his own. His courage was gone. He had no initiative of his own. The super-man had proved himself to be the inferior man.

RADICALLY WRONG

Can it be that we were wrong in fighting for democracy in the face of so many late attempts to introduce autocracy? Control by the individual is democracy; control by the State is autocracy, or, in other words, socialism. This bill leads to control by the State, or socialism; socialism leads to bolshevism, and bolshevism leads to anarchy. We therefore oppose them because they lead the way to socialism and because they are radically wrong.

CAT IN A BAG

We oppose them because they are a step toward State control of the practice of medicine. They are "a cat in a bag."

You are asked to pass bills which are not at all specific. The proponents cannot tell you how much it will cost to administer these laws; they cannot point to good results obtained in any country; they cannot

specify in what way they propose to employ physicians nor what remuneration they intend to give them for their services.

They cannot specify in what adequate way they intend to give nursing and expert prenatal care, or nursing and hospital care at the time of confinement, yet all these are called for but not specified in the bills.

GREAT COST UNNECESSARY

The very things sought are now in a measure being accomplished. Physicians under the law report all births as they occur.

Expectant mothers engage their physician several months in advance. He is thereby in a position to give advice and prenatal care. As taxpayers, we oppose these bills because they are unnecessary, and because the same results can be obtained without cost to the Commonwealth.

We oppose them because of the enormous financial burden upon the taxpayers. The price would be astounding and prohibitive. Just think of it—a very conservative amount for prenatal and postnatal care would be at least two million dollars, and that alone is the cost price of the newly-born. When the child is grown to adult life the State must again consistently finance the control of its health and working efficiency. And when old age has brought to an end his useful career, an old-age pension would be the next thing on the program. Death would come as a fitting climax, and the least that could be done would be to give him a decent burial.

All told, it is a simple problem of mathematics. If it costs two million for the birth of the State's children, how much would it cost by the time they were brought up, and then dead and buried? The answer would be millions and millions. Can the State afford it? No. Taxpayers could well object with righteous indignation.

OSTEOPATHIC BILL AND OBJECTIONS

52d G. A. HOUSE BILL NO. 373 1921

Introduced by Mr. McCabe, March 15, 1921.

Read by title, ordered printed and referred to Committee on Efficiency and Economy.

A BILL

For an Act in relation to the regulation of the practice of osteopathy.

SECTION 1. *Be it enacted by the People of the State of Illinois, represented in the General Assembly:* It shall be unlawful for any person to practice osteopathy without a license so to do.

Sec. 2. The practice of medicine and surgery in all their branches, by persons now or hereafter authorized under the laws of this State to practice as such shall in no wise be affected by the provisions of this Act.

Sec. 3. All licenses or certificates heretofore issued pursuant to the laws of this State, authorizing the holder thereof to treat human ailments without the use of medicine, internally or externally and without operative surgery, or to practice midwifery, and in

force July 1, 1921, shall in no wise be affected by the provisions of this Act.

Sec. 4. No person shall, except as otherwise provided in this Act, hereafter be licensed to practice osteopathy, or any other system or method of treating human ailments, or midwifery, unless he shall pass a satisfactory examination conducted by the Department of Registration and Education, pursuant to an Act entitled, "An Act in relation to the civil administration of the State government, and to repeal certain Acts therein named," approved March 7, 1917, in force July 1, 1917; provided, that the functions and duties of the Department of Registration and Education, as set forth in Section 10 of the foregoing (commonly known as the Civil Administrative Code), in so far as they affect or relate to the practice of osteopathy, shall be exercised by the said Department of Registration and Education upon the action and report in writing of five persons, all of whom shall be reputable osteopathic physicians, licensed as such under the laws of this State, no one of whom shall be an officer, trustee, instructor or stockholder in any professional school or college of osteopathy. Said persons shall be designated from time to time by the director of Registration and Education, and in making the designation of such persons the director shall give due consideration to recommendations by members of the osteopathic profession and by organizations therein.

Sec. 5. Each applicant for the examination provided in this Act shall comply with the following requirements:

(1) Make application for examination on blank forms prepared and furnished by the Department of Registration and Education.

(2) Submit evidence, verified under oath and satisfactory to the Department of Registration and Education, that the applicant is twenty-one (21) years of age or over and has the preliminary and professional education required by this Act.

(3) Designate in his application whether he desires to practice:

(a) As an osteopathic physician, or

(b) As an osteopathic physician and surgeon.

(4) Pay in advance to the board fees as follows:

(a) For examination in osteopathy, \$10.00.

(b) For examination in surgery, \$10.00.

(c) For issuance of license, \$5.00.

(d) For a license to a practitioner admitted from a foreign state or country, under the provisions of Section 10 hereof, the same fees charged by the State endorsing the application of an Illinois physician applying for registration in such state, but in no case less than \$25.00.

(e) For an examination to determine the preliminary educational fitness of the applicant in those cases where the applicant fails to present a proper certificate showing that he has satisfactorily completed an approved course of study in a high school or other equivalent school, as provided in Section 6 hereof, \$5.00.

Sec. 6. Standards of preliminary education deemed

requisite for admission to a reputable osteopathic school, college or institution in good standing are fixed as follows:

(1) That the applicant for admission has satisfactorily completed an approved course of study in a high school or other equivalent school having a course of study requiring an attendance through four (4) years and which is approved by the Department of Registration and Education; or,

(2) That the applicant present a certificate of having passed a satisfactory written examination before the Superintendent of Public Instruction of this State, or like State officer of another state or country, in the studies embraced in the curriculum of a high school approved by the Department of Registration and Education.

Sec. 7. Standards of professional education are fixed as follows:

(1) To practice as an osteopath physician:

(a) The applicant shall be a graduate of a professional school or college of osteopathy which requires as a prerequisite of graduation four (4) years' course of instruction, the time elapsing between the beginning of the first year and the ending of the last or fourth year to be not less than forty (40) months, and which is deemed to be reputable and in good standing.

(2) To practice as an osteopathic physician and surgeon the applicant, in addition to the requirements of this section hereinbefore set forth, shall submit evidence that he has:

(a) Completed a two (2) year post-graduate course in a reputable professional school or college of osteopathy in good standing, involving a thorough and intensive study in the subject of surgery; or,

(b) Completed a one (1) year post-graduate course in a reputable school or college of osteopathy, as aforesaid, and in addition thereto a one (1) year course of training in a hospital approved by the Department of Registration and Education.

Sec. 8. Examination of those who desire to practice as osteopathic physicians shall embrace those general subjects and topics a knowledge of which is commonly and generally required of candidates for a degree of Doctor of Osteopathy by reputable osteopathic schools or colleges in the United States. It shall not include the subject of major surgery, but shall include minor surgery.

Examination of those who desire to practice as osteopathic physicians and surgeons shall be of the scope defined in the first paragraph of this section, and in addition thereto, with respect to the subject matter of major surgery, shall be of such character as to thoroughly test the qualifications of the applicant as a practitioner of osteopathy and surgery.

Sec. 9. Each applicant who successfully passes the examinations prescribed by this Act shall be entitled to a license. The following kinds of licenses shall be issued:

(1) To practice as an Osteopathic physician without operative major surgery;

(2) To practice as an Osteopathic physician and surgeon.

Nothing herein contained shall be construed to deny to any person licensed under the provisions of this Act the right to use anesthetics, germicides, parasitocides, narcotics, and antidotes, as taught in reputable schools or colleges of Osteopathy in good standing under the provisions of this Act.

Sec. 10. The Department of Registration and Education may in its discretion issue a license, without examination, to a practitioner who has been licensed in any country, state, territory or province, upon the following conditions:

(1) That the applicant is of good moral character;

(2) That the applicant shall designate in his application whether he desires to practice (a) as an Osteopathic Physician, or (b) as an Osteopathic Physician and Surgeon.

(3) That the requirements of registration in the country, state, territory or province in which the applicant is licensed, are deemed by the Department of Registration and Education to have been practically equivalent to the requirements of registration in force in this State at the date of such license.

The Department of Registration and Education may also in its discretion issue a license, without examination, to an Osteopathic Physician who is a graduate of an Osteopathic College in good standing and who has passed an examination for admission into the Medical Corps of the United States Army, United States Navy, or the United States Public Health Service.

It may likewise in its discretion, in exceptionally meritorious cases, issue a license to a reputable osteopathic physician applying for reciprocity under the provisions of this section, who is unable to comply with the requirements hereof relating to examinations as the basis for the issuance of license.

Sec. 11. Every holder of a license shall display it in a conspicuous place in his principal office, place of business or employment.

Sec. 12. Osteopathic Physicians shall observe and be subject to all State and municipal regulations relative to reporting all births and deaths and all matters pertaining to the public health, with equal rights and obligations as physicians of other schools of medicine, and such reports shall be accepted by the officers of the department to which the same are made.

Osteopathic Physicians or Osteopathic Physicians and Surgeons licensed hereunder shall have the same rights as physicians or surgeons of other schools of medicine with respect to the treatment of cases or holding of offices in public institutions.

Sec. 13. The Department of Registration and Education may either refuse to issue or may suspend or revoke any license for any one of, or any combination of the following causes:

(a) Conviction of a felony, as shown by a certified copy of the record of the court of conviction;

(b) The obtaining of, or an attempt to obtain, a license or practice in the profession, or money, or

any other thing of value, by fraudulent misrepresentations:

(c) Gross malpractice;

(d) Continued practice by a person knowingly having an infectious or contagious disease;

(e) Advertising by means of knowingly false or deceptive statements;

(f) Advertising, practicing, or attempting to practice under a name other than one's own;

(g) Habitual drunkenness, or habitual addiction to the use of morphine, cocaine, or other habit-forming drugs.

The Department of Registration and Education may neither refuse to issue, nor refuse to renew, nor suspend, nor revoke any license, however, for any of these causes, unless the person accused has been given at least twenty (20) days' notice in writing of the charges against him and a public hearing by the Department of Registration and Education.

The Department of Registration and Education shall have the power to compel the attendance of witnesses and the production of relevant books and papers for the investigation of matters that may come before them, and the presiding officer of said Department may administer the requisite oaths and such Department shall have the same authority to compel the giving of testimony as is conferred on courts of justice.

Sec. 14. Each of the following acts constitutes a misdemeanor, punishable, upon conviction, by a fine of not less than twenty-five dollars (\$25.00) nor more than two hundred dollars (\$200.00).

(a) The practice of Osteopathy or an attempt to practice Osteopathy without a license;

(b) The obtaining of, or an attempt to obtain a license, or practice in the profession, or money, or any other thing of value by fraudulent misrepresentation;

(c) The making of any willfully false oath or affirmation whenever an oath or affirmation is required by this Act;

(d) Advertising, practicing or attempting to practice under a name other than one's own.

Sec. 15. The Department of Registration and Education shall keep a record which shall be open to public inspection at all reasonable times, of its proceedings relating to the issuance, refusal, renewal, suspension and revocation of licenses to practice Osteopathy or Osteopathy and Surgery. This record shall also contain the name, known place of business and residence, and the date and number of the license of every registered Osteopath.

Sec. 16. All Acts or parts thereof, conflicting herewith, are hereby repealed.

Sec. 17. Should the Courts declare any section or any part of a section of this Act unconstitutional or unauthorized by law, or in conflict with any other section or part or sub-division of a section or provision of this Act, then such decision shall affect only the section or part or sub-division of a section, or provision so declared to be unconstitutional, and shall not affect any other section or any other part or sub-division of a section or provision or part of this Act.

It is further expressly provided that each section and each part or sub-division of a section herein, so far as an inducement for the passage of this Bills is concerned, is independent of every other section, and every other part or sub-division of a section, and no section or any or sub-division of a section is an inducement for the enactment of any other section or part or sub-division of a section.

Sec. 18. This Act may be known and cited as "The Illinois Osteopathic Act."

OBJECTIONS TO OSTEOPATHIC BILL

THE OSTEOPATHIC BILL IS CUNNING AND DECEPTIVE.
GRANTS SPECIAL PRIVILEGES TO THEIR CULT. KILLS
MEDICAL PRACTICE ACT. IS AN AFFRONT TO
PUBLIC INTELLIGENCE

House Bill No. 373, "For an Act in relation to the regulation of the practice of Osteopathy," is a renewal of the Biennial attempt of the Osteopaths to secure the right to practice medicine and surgery, including obstetrics, without the necessity of meeting the educational qualifications and other important requirements established by law for regular practitioners of medicine and surgery.

The Osteopathic Bill, H. B., 373, recently introduced in the Illinois legislature, is in point of cunning and deception, the premier effort of the Osteopathic cult. To the average individual, be he legislator or otherwise, *unless he is familiar with medical regulation*, this proposed legislation will appear to be fair and devoid of menace to the public welfare. In this lies the greatest danger of successful promotion of the present Bill and the implication of immeasurable damage to the public health and gross injustice to the 12,500 Physicians and Surgeons of the State.

WHAT THE BILL DOES

In every important respect this Bill does the very thing it purports not to do. For instance, Section II, of the Bill provides that "the practice of medicine and surgery in all their branches, by persons now or hereafter authorized under the laws of this State to practice *as such* (incorrect expression), shall in no wise be affected by the provisions of this 'Act,'" while Section XVI provides that "all Acts or parts thereof, conflicting herewith, are hereby repealed."

Inasmuch as the provisions of this Act (Osteopathic House Bill 373), are in conflict with practically every important section and paragraph of the existing Medical Practice Act, it is apparent that this Bill completely emasculates the Medical Practice Act.

Again, Section IV, line 11: Delegates the determination of the fitness of Osteopathic candidates to "five reputable Osteopathic Physicians."

This Section IV, providing for the creation of a Committee of Osteopathic examiners, is in conflict with vitally important provisions of the Civil Administrative Code relating to the examination of those seeking the right to treat human ailments. It would, therefore, repeal important sections of the Code,

eliminating all legal means for the licensure of Physicians and Surgeons, midwives, chiropractors, etc., etc.

The effect of this provision is to destroy all concentration of forces or supervision by the Department of Registration and Education and to govern every Branch by entirely separate Boards.

This would bring about a chaotic condition for the reason that until such time as a new medical practice Act could be enacted into law and the Civil Administrative Code amended, none but Osteopaths could hereafter qualify for treatment of the sick, if House Bill No. 373 is placed upon the statutes.

Section V, lines 10 and 11: What is this Osteopathic Surgery? Is it non-instrumental? Do they study real Surgery or are they to be entitled to do an appendectomy, haphazardly, as one might dig to locate a leak in a water pipe?

Section V creates two classes of Osteopaths; an Osteopathic physician and an Osteopathic physician and surgeon. The very apparent intent of this is to empower Osteopaths to perform surgical operations without stint and to permit them to administer medicines, otherwise the distinctions would be meaningless and the net result of this Section is to permit Osteopaths to practice the healing art in *all its branches*.

There is an insidious effort throughout the Bill to lower the standard of preliminary education so that if an applicant has not a high school education the "Osteopathic Board" can give him an examination of any kind they like and pass him. (Sec. V. (c)—VI (2).)

If I were an Osteopath I would object to Section VII, line 7, and want to know how this "deemed to be reputable and in good standing" is to be interpreted. If I were in the saddle and wanted to settle some old scores, I would rely upon the case of Dr. Dent vs. State of W. Va., 129 U. S. Reports 114, to sustain me in the exercise of discretion. It is this danger of autocratic supervision which we have been fighting in the medical practice (Re-registration Acts).

Section VIII provides that Osteopathic surgeons shall be examined in major surgery. This carries the necessary implication that they may perform major surgery according to Osteopathic standards which may be entirely foreign from and not to be measured by the status of the science of surgery in general. In consequence a very inferior standard of surgery could be set up among Osteopaths, so that they might perform a laparotomy with a hatchet and still no one could criticize them because they are not subject to the standards of scientific surgery.

Section IX, lines 6 to 10: A definition of Osteopathy says, "It is a drugless system of healing." As such, Osteopaths are at present licensed to practice in Illinois. The use of anesthetics and narcotics is very dangerous in the hands of the untrained, yet in this paragraph they are asking for the legal right to use anesthetics, germicides, parasiticides, narcotics and antidotes, yet there is no evidence to show that they have studied and know the physiological action of

drugs and their pathological potentialities. This Section is very elastic; it covers the practice of medicine, as such, without adequate evidence of mental equipment.

Also, this paragraph is very deceptive; reading superficially, one is given the impression that Osteopaths would be given the right to use *only* "anesthetics, germicides, parasitocides, narcotics and antidotes," whereas as a matter of fact under this act Osteopaths would secure the right to use drugs and medicines without any restrictions whatsoever.

It is further provided by Section XII, that "Osteopathic physicians and physicians and surgeons shall have the same rights as physicians or surgeons of other schools of medicine, with respect to the treatment of cases, or holding of offices, in public institutions." A provision that they shall have the same right as any other physician or surgeon, "with respect to the treatment of cases," can readily be interpreted as meaning that they are unlimited entirely, and such is probably the intention of the persons drafting the Act. The provision that they shall have "the same rights" respecting the "holding of offices, in public institutions," can readily be considered to mean that they shall have equal representation upon the staff of every public institution as other branches of Medicine and Surgery, thus, in an Institution for the Insane, they could demand that the staff have as large a number of Osteopaths appointed on the staff as were appointed from any other school of medicine or surgery.

Section XIII, lines 10 and 11: Theoretically this is designed to satisfy the anti-syphilitic crusaders; practically it has the capacity to terminate the usefulness of a physician (Osteopathic) who has the misfortune to have a septic finger, or a tubercular spot in his lung, or Barber's itch, or any one of the 57 varieties of conditions. Statistics show that over 95 per cent. of the human race has or have had tuberculosis. If such a law were literally enforced, it would bring about a chaotic condition.

If the Osteopaths tolerate this, or if regular Physicians permit them to tolerate it without warning, it will be incorporated in our Medical Practice Act next and the determination of a doctor's fitness to practice will be beautifully taken care of, by Registration Act, or no Registration Act.

Section XIII, lines 22 sqq.: There being no qualification of the word "matters" the department of Registration and Education may do under this law, what the Rockefeller Foundation in New York tried to do through a Questionnaire last year; ascertain from the records (of Osteopaths) and later (of Physicians) whatsoever the Presiding Officer may choose to investigate and, although not a Judicial Officer, will have the same "authority to compel the giving of testimony." In the hands of a Divinely controlled, just man, this would be innocuous; in the hands of a bureaucrat of a political party it would be mighty powerful.

Section XVII, lines 2 sqq.: Assuming that this whole Act with the exception of Section XIII referred to above, were eliminated as unconstitutional—Section XIII would be a plenty to make bureaucratic

discretion determine the practice of Osteopathy under whims which would have the force and effect of a Statute.

If I were an Osteopath, I would try to kill this Bill.

It is repeated, therefore, that this Bill is so cunningly devised, that it is open to the charge of wilful deception. A gross imposition on the legislature and on the unsuspecting public.

It merits only that consideration which is necessary to bring about its early demise.

Osteopaths and all other persons who desire to treat human ailments can acquire the right to do so, under the provisions of the existing Medical Practice Act. If Osteopaths or any other drugless practitioner desires the right to use drugs and medicines, to perform surgical operations, and to attend obstetrical cases, he can do so under the provisions of the Medical Practice Act, by simply meeting the requirements that are provided for unlimited practice, such as all Physicians and Surgeons have been obliged to meet. Any requests made of the legislature to grant special privileges to a special class, is not only unfair, but may be properly characterized as an affront to the intelligence of the members of our legislative body.

Many other criticisms might be directed against this Osteopathic Bill, but surely what has been said should be sufficient to condemn it in the mind of any right-thinking man.

MASSACHUSETTS DISAPPROVES OF MATERNITY LAWS

MASSACHUSETTS DEFEATS MATERNITY BILL—ILLINOIS DOCTORS TAKE NOTICE

For the second time state-wide maternity bills have been defeated in Massachusetts.

In 1920 a bill was introduced into the legislature providing for state-wide maternity benefits—it was defeated.

There was introduced into the 1921 legislature two bills providing for state benefits in maternity cases. The doctors of the state, assisted by lay organizations and newspapers, carried on a vigorous campaign of education among the laity, showing the prohibitive cost of such a law, as well as the fact that morbidity, etc., will not be lessened under such schemes. This propaganda was sufficient to defeat the proposed laws in committee.

The same bill in the national legislation, known as the Sheppard-Towner bill, failed to be recommended at the present session of Congress.

A similar bill has been introduced into the present Illinois legislature. Illinois doctors and lay organizations should profit by the experience of the Massachusetts doctors and defeat the bill in this state.

WISCONSIN ASKS FOR INSURANCE FOR THE IDLE

WISCONSIN BILL PROVIDES FOR PAY FOR UNEMPLOYED

MADISON, Wis., Feb. 4.—A bill to compel employers to pay unemployment insurance benefits to

their workers, when unemployed, was introduced in the Wisconsin legislature today.

The measure, prepared by Professor John R. Commons, department of economics, University of Wisconsin, Monday, for insurance companies to pay benefits to the discharged workers at the rate of \$1.50 a day for adult men and women, and 75 cents a day for boys and girls.

The unemployed who had worked at least 26 weeks would be entitled to benefits for a maximum period of 13 weeks on the basis of one week for every four weeks of work.

Workers idle as a result of a strike or lockout are not entitled to benefits, and farm laborers also are exempted.

NEW YORK DOCTORS UP AGAINST A NEW COMBINATION THIS YEAR

New York State, where most of the schemes against the progress of medical science and the material interests of the medical profession are inaugurated, is up against a new combination this year. The Health Centres Bill, printed in the September number of this Journal, page 267, is to be re-introduced into the legislature in the near future as a sop to quiet the objections of the voters of the rural districts against class legislation; while a Health, Old Age, and Unemployment Insurance has already been introduced to capture the voters of the industrial districts. Inasmuch as some similar bills will be introduced into our legislature, they are of considerable interest to the medical profession of this state.

NEW YORK GOVERNOR EMASCULATES THE NARCOTIC DRUG COMMISSION

Governor Miller of New York is for retrenchment and has cut down budgets enormously; one of these is the narcotic commission which asked for \$250,000.00 and has been cut off entirely from the feeding trough—of course the foundations may keep Sarah Graham Mulhall and the rest "on the job" but the narcotic law will be more honored in the breach than in the observance as inspectors do not work for their health. We are confident that the worthless narcotic commission in that state will be abolished, for we feel that the Lord Bill abolishing the commission will pass and then the doctors of New York can write into the statutes the Harrison Bill.

The Narcotic Bill before the New York Legislature this year would have made things velvety for certain New York institutions but it was killed as the Cotillo Bill last year and will be killed this year.

The Compulsory Health Insurance Bill in New York State has been introduced "for educational purposes" but if we judge correctly it has very little chance of getting through. We understand the Governor is prepared to veto it but we do not believe he will have the opportunity of doing so for the legislators in that state have learned a lesson on that subject and health insurance is taboo.

MAIL ORDER PRACTICE OF MEDICINE IS THE LATEST FAD

The Health Commissioner of Boston, Mass., tries to immitate Lenine and Trotsky and go these "Soviet Government Bugs" one better if such a thing is possible in promulgating socialistic medicine. The following from the *New York Herald* speaks for itself:

BOSTON, March 24.—When things go wrong with health in Boston homes hereafter the visit of the family doctor and his fee may be avoided. The city, through its Health Department, stands ready to tell its citizens and their dependents what ails them, Health Commissioner W. C. Woodward announced today.

If baby cries without apparent cause, if father has spots before the eyes or mother suffers fainting spells, a line dropped to the new municipal health information bureau will bring in the next mail diagnosis of their ailments, with advice for self-treatment or for recourse to clinics or specialists without cost.

Communications will be confidential. Symptoms should be told in brief detail. Age, sex, occupation and other facts should be given. A self-addressed stamped envelope should be enclosed for reply. These are the only requirements, Commissioner Woodward stated.

Federal and State authorities were consulted about the innovation, he said, adding that while the plan opened the door to the fancies of hypochondriacs, he felt that much genuine benefit would accrue to those with real afflictions. Persons who would not consult a doctor, he thought, would avail themselves of the new plan.

LYING CHIROPRACTIC PROPAGANDA

THE MIRIAM RUBIN CASE IN WAUKEGAN, ILLINOIS, NOT BENEFITED BY CHIROPRACTIC TREATMENT. THE FOLLOWING LETTER IS FROM THE DOCTOR WHO ATTENDED THE RUBIN CHILD.

"NO BAFFLING CASE"

Dr. R. H. T. Nesbitt, attending physician in the Rubin girl case, has become incensed apparently over the wide publicity that has followed the case. Accordingly he has written this communication to the Sun in which he expresses himself:

EDITOR Daily Sun: I am compelled to ask a little space in your paper. I am deluged with letters and phone messages from discerning, thinking people who discredit the notorious sensational and highly exaggerated fabulous accounts published. The family have been annoyed by the continued low fiction in exploiting the case. Just five minutes ago Mr. Rubin, the father, remarked that there was not five percent of the "write-ups" true.

First: The medical men were not baffled; nor at the end of their resources.

Second: Medical measures and remedies have been constantly administered and there was gradual im-

provement; and the morning before the chiropractor gave his treatment the child had normal temperature, and the child had several intervals of sleep. The functions of the body had to be kept acting by medication and other means. Otherwise we might have had fatal results.

Third: There was no mal-alignment of the spine or any dislocation of the vertebra, as four capable medical men had carefully examined the spinal column and the whole body. Subluxation of vertebrae is a talking proposition of a certain clique of spinal mania-phobists. Authorities state there is little or nothing to it. Pressure on nerve produces impaired function or paralysis, not excitement.

Fourth: It is not true that there was a sudden cessation to all symptoms. No medical man, surgeon, physician, no neurologist, psychologist, or psychiatrist of any analytical mind would for a moment think that an excited state of the speech center buried deep in a lobe of the brain could be quieted by any snap of the neck or thumbing of the spine. The blood test demonstrated irritating agents circulating through the exciting cells concerned in the faculty of speech, as they did other centers causing the restlessness. The talking was only one of the symptoms.

It is not true that the child was delirious and irrational. She was not only RATIONAL but very bright and witty, amusing us frequently with her quick and clever answers to our questions.

She was perfectly docile, taking her medicine and submitting to any handling necessary without complaint, always with a thank you.

Fifth: It is not true that the temperature fell suddenly. The betterment is what could be expected for the time the affection had lasted and the treatment she had received. The temperature kept persistently up during spinal chiro treatment. Several days ago I ordered all spinal so-called adjustment stopped, for previous to the chiro treatment the patient had not a pain or ache anywhere. She became so sore and tender that she dreaded the operation and dreads anyone to touch her.

Miriam Rubin is still a very sick child, but I hope with long continued absolute rest and internal medication and soothing applications to the back she will be restored to perfect health.

R. H. T. NESBITT, M. D.

Waukegan Daily Sun, February 28, 1921.

NOTE: The following is a summary of the Baby Rubin case:

1. The child suffered not from a strange "talking" sickness, but from a form of encephalitis with excitation.

2. The "incessant" talking was in reality intermittent, both before and after the alleged "adjustment."

3. The chiropractic "treatments" did not "cure" the disease as claimed; they had no appreciable effect on its course.

4. The nurse's record shows that the chiropractor gave "treatments" from February 12 to February 23,

at which time he was dismissed as the patient's condition gave no evidence of benefit from his "treatments." On the contrary, she was complaining of severe pain along the course of the spine. Since then the family physician has had entire charge of the case.

5. The patient is not restored to health; on March 24th she still was seriously ill.

THE ERROR OF MATERNITY BENEFITS. PHYSICIANS EXPOSE FALSE CLAIMS FOR MATERNITY

A. H. Quessy, M.D., at the League of Women Voters, Winchester, Mass., January 6th, showed how the maternity bills are founded in error.

MATERNITY ERROR EXPOSED

He said:

"We differ with the proponents as to cause and treatment. These bills, when analyzed, infer two things: first, that poverty is one cause and the remedy is financial aid (cash benefits); and, second, that the practitioners of medicine are lacking in efficiency in the practice of obstetrics.

We repudiate both the cause and treatment, as set forth by the proponents, and we will proceed to show our viewpoint.

FIRST CAUSE—POVERTY

The Massachusetts Commission of 1920, that has investigated Maternity Benefits, finds that in a negligible number of cases there might have been true poverty, and, in consequence, recommends the elimination of cash benefits. Hence, there is no need to discuss this point further.

THE NEXT CAUSE

INEFFICIENCY OF THE PRACTITIONERS OF OBSTETRICS

Is it not true that, during the last twenty years, medical training has improved greatly; good nursing has become general; hospitals have become more numerous and have excellent maternity wards; pituitrin has made instrumental deliveries much less common; surgical cleanliness has become universally recognized and used by the profession; and physicians are as faithful as ever to their patients' welfare?

WHAT HAS BEEN DONE

Is it not true that medical educators, the State Department of Health, the local health authorities, nursing associations, child welfare organizations, women's leagues, and numerous other independent organizations, together with the co-operation of the physicians, have all been actively at work in the last few years to protect the health and life of the expectant mother and her offspring?

The above factors should have diminished the mortality.

Yet statistics are quoted by advocates of State Maternity Benefits to make it appear that the rate has increased. If so, these methods have failed. Therefore, if mortality has increased, there must be

other causes. Why, then, place all the blame on the physicians and health authorities, as implied in these bills?

It is unjust and unfair that medical educators, physicians, hospital staffs, and all other forces that have been doing so much for the prospective mother should be branded before the public of both state and nation as incompetents.

This arraignment of itself should be enough to dispose of these bills.

THE TRUE CAUSE

The question now comes: What is the true cause, and what is the right treatment for the alleged mortality?

Before stating our viewpoint of the cause, we will make a few statements.

WHY OUR MATERNAL DEATH RATE APPEARS HIGHER THAN EUROPE'S

The recording of statistics more accurately in the United States than in many other countries has made our country to appear to have a higher maternal mortality rate. This apparently high rate of deaths of mothers is made to seem more manifest, in recent years, during which greater pains have been taken to secure reports with greater accuracy throughout an increasingly larger registration area.

MORTALITY OR MORBIDITY

There is a difference between mortality and morbidity. Mortality is the actual death rate. Morbidity is the quality of the disease, or the abnormal physical conditions which led to death. Just how many deaths were actually due to mismanagement of obstetrics and how many were due more directly to the quality of the disease, or the morbid conditions in the child-bearing woman or the new child should be stated before making a wholesale indictment of the medical profession.

CAUSE IS MORAL AND SOCIAL

We contend that the true cause lies in our moral and social conditions. We were created right, but have not kept ourselves right. Bad habits, wrong living, and, we might add, heredity, have brought about the physical defects which are giving the fatal results to child-birth.

The moral conditions in this country, as well as elsewhere, are deplorable. Ministers of all denominations are appalled at the lack of morality. Venereal diseases are affecting the health of manhood and womanhood.

Low conditions of immorality open the gates to all kinds of imperfections in social conditions. When morality is lacking, there is nothing to check the tendencies to follow fashion, regardless of the effect on health. These tendencies are seen in the ill-fitting corsets, which cramp the abdominal organs and push them out of relation, causing undevelopment and displacements; in the high heels, causing all kinds of

orthopedic defects, as well as other defects due to posture, and in dresses that expose to the weather.

In addition, the tendency is toward pleasure-madness, which turns night into day, depriving future mothers of the fresh air, rest and sleep needed to renew expended energy lost in the toil of the day.

RESULTS

The result of all this is to lower the general health and powers of resistance. Girls arrive at the stage of motherhood weak, anemic, ill-nourished, nerve-wrecked, deformed, and utterly unfit to bear children. Woman cannot give to her child that which she has not. If she has good health, she may transmit good health. If she has good physique, she may transmit good physique. If she has not these, she will give the opposite.

Heredity plays an important part, and physical imperfections are handed down from generations, which cannot be changed by prenatal and postnatal care. Physical conditions today are found in pregnancy that are hereditary as much as is epilepsy.

LAW IMPOTENT

State Maternity Benefits will not prevent deaths of expectant mothers who have been made unfit by immorality, social excesses or heredity, and who constitute the great part of the $\frac{1}{2}$ of 1% of mothers who die from child-birth causes.

TREATMENT

Finally, as to treatment, we claim that existing agencies are saving lives of mothers and babies better than ever before, and the laws which exist cover the ground and need only to be worked out and enforced to their fullest possibilities.

We suggest one potent factor, and that is the proper education of the people to the correct habits of living.

To go farther than this is to invade the realm of private rights, personal liberties and constitutional safeguards.

SAYS WILL NOT IMPROVE OBSTETRICAL PRACTICE

Dr. James Lincoln Huntington
311 Marlborough Street
Boston, Mass.

March 24, 1920.

Massachusetts Civic Alliance,
50 Bromfield Street, Boston, Mass.

"At the recent meeting of the Obstetrical Society of Boston, the president, Dr. Franklin S. Newell, authorized me to forward you the following extract from our minutes:

"January 27, 1920, the following resolution was passed by a majority vote of the Society: 'The Obstetrical Society of Boston is opposed to the proposed legislation in regard to Maternity

Benefits as not calculated to improve Obstetrical practice in the Commonwealth of Massachusetts.'

"Very truly yours,

(Signed) "JAMES LINCOLN HUNTINGTON,
"Secretary."

J.L.H./E.

Issued by Massachusetts Civic Alliance,
50 Bromfield Street, Boston.
Maternity Series, No. 8.

NEW YORK DRUG COMMISSION SHOULD BE ABOLISHED

SINCE ITS CREATION IT HAS DONE NOTHING BUT ADD TO THE BURDENS OF HONORABLE, UPRIGHT, CONSCIENTIOUS PHYSICIANS, AND HAS CAREFULLY AVOIDED INTERFERING WITH THE COMMERCIAL PRIVILEGES OF MANUFACTURERS OF NARCOTIC-CONTAINING PROPRIETARIES.

AN ELEVENTH COMMANDMENT

With no desire to be irreverent one nevertheless feels, on reading the copy of the Narcotic Drug Regulations dated December 27th, 1920, and received February 1, 1921, that the man who is big enough to announce "I promulgate the following rules," should be classified along with Moses and Aaron at the least. There is a special reason for mentioning Moses and Aaron—they lived a great many years ago, they acquired tremendous autocratic power, and they are credited with being deputies of the Almighty in the conduct of human affairs. If one turns to Rule 12 he understands where the simile is apt, for if ever an autocratic as well as archaic pronouncement was promulgated it surely is here. Without adequate warning the physicians and druggists of New York State find themselves forbidden either to prescribe or dispense any preparations of opium or cocaine unless the triplicate prescription blanks are used. Extended inquiry shows that the first intimation of the need for triplicate prescription blanks is contained in this belated notice, and that very few know where they can be procured unless it be from Albany by mail. One druggist had had one presented to him. One physician out of twenty spoken to had a pad of them.

An analysis of this arbitrary and unnecessary order reveals some conditions that are well-worth thinking over. The Federal law requires that the physician shall write his prescription for narcotics upon a blank upon which, among other things, his name and address are printed. The triplicate blanks are at variance with this federal regulation. Not only is there no place to print them, but the form is supplied in such a way that one cannot print on it.

The Federal law requires the druggist to file his prescription in one way. This new State regulation requires him to keep it in another file. How can he keep one prescription in two files? And thirdly, although physicians are forbidden to prescribe and druggists to dispense *Mistura Pectoralis Stokes* unless

the triplicate prescription blank is used, any citizen may purchase from any druggist four ounces of Stokes expectorant over the counter without a prescription!

These three inane contradictions supply in themselves the strongest reason for the abolition of a Commission which ever since its inception has added to the burdens of honorable, upright, conscientious physicians, and has carefully avoided interfering with the commercial privileges of the manufacturers of narcotic-containing proprietaries.

It is difficult to see what the Commission has accomplished besides expending large sums of the State's money for salaries. Its abolition is essential on several grounds, not least of which has been the failure of its chief function—the control of illicit narcotic traffic.

STANDARDIZATION OF HOSPITALS VERSUS STATE MEDICINE

The movement on foot to "standardize" the state and nation is based on a broader principle than the term would suggest. It includes the standardization of the entire profession—doctor, nurse and hospital. The basic principle involved in this movement is the preservation of medicine as an independent, unshackled profession. The legal profession of today is subsidized either by the state, corporation or labor. The law as interpreted by the judges must reflect popular opinion to a greater or less degree. The educational profession of today is on a salary dependent upon appointees, usually political, who regulate the salary of our educators by the amount of taxes obtainable from a greatly overtaxed public. The ministerial profession exists on totally inadequate remuneration from those interested in religious work, as compensation for labors which require exceptional qualifications as to character and training.

The medical profession alone has stood the test of the centuries, unshackled and independent of all outside influences. Commercialism on the one hand and socialism on the other threaten this independence. There is but one way to defend our profession. Unite as a body, improve our standards in every way possible, and teach each other. Be students and teachers one of another, banish commercialism from our ranks and refuse to compromise with any outside organization. Upon this principle modern medicine must stand. With such cooperation of all factors involved, we need never bow our heads to the political boss, or walking delegate of either capital or labor.

—*Northwest Medicine.*

PRESCRIBING BY NURSES

The State Board of Health should exercise a more stringent scrutiny of the activities of nurses employed in industrial plants. No one would question the value of the nurse in attending to the minor injuries sustained by workmen in our industrial plants, but

beyond this she should not be allowed to exercise her prerogative.

It has come to our attention that a nurse employed in one of the large industrial plants in this State wrote a prescription for an external wash and gave it to a workman telling him to get it filled at a drug store. The druggist refused to fill the prescription because it was not written by a physician, but he also noted that the prescription called for the drug to be used in a strength twice as strong as ordinarily used, and such as might produce a burn on the skin. When the workman returned to the nurse with the story that he could not obtain the prescription, he was ridiculed and the druggist came in for a share of the nurse's rancor.

Such a patent violation of the Medical Practice Act calls for action on the part of the Board charged with the enforcement of this Act. Unless this Act is strictly enforced we may expect a serious and lamentable accident which will call forth much deserved criticism.—*Rhode Island Med. Journal*, March, 1921.

RESTORATION OF HEARING IN A CASE OF GUNSHOT INJURY OF THE EUSTACHIAN TUBES

JOHN W. BAYLOR

From the Department of Surgery, The Johns Hopkins University and Hospital

Many of the technical difficulties of an examination of the ear, nose and throat have been removed by the introduction of electrically lighted instruments. The nasopharyngoscope, devised by Dr. Edgar M. Holmes of Boston, is especially valuable for the diagnosis of infections of the posterior ethmoidal and sphenoidal sinuses, and for the inspection and treatment of the Eustachian tubes. It is true that the use of the nasopharyngoscope is not essential for the diagnosis and treatment of the majority of cases, and it is only by constant practice that one acquires sufficient skill to use it to advantage in the cases that could not be treated by the ordinary methods. For the past five years we have used this instrument in the examination of all nose and throat cases and in the treatment of all Eustachian tube conditions, and it is to this fact that we ascribe the successful outcome in the following case:

F. N., white, aged 28. Surgical Nos. 50309 and 50448, Medical No. 43470.

The patient was admitted to The Johns Hopkins Hospital February 20, 1920, complaining of deafness in both ears that had resulted from gunshot wound received two years before. The bullet from a .38 caliber pistol had entered the right side of his face 1 cm. in front of the tragus at the lower border of the zygoma, and passed downward at an angle of about 35 degrees. He developed a temporary facial palsy and a subjective hemianesthesia, both on the right side. Immediately after the accident he was confined to bed for three weeks in a hospital in Tennessee. No attempt was made to remove the bullet. His

hearing was subjectively normal during this period. A short time later he noticed some impairment of hearing in the right ear, and in six or seven months this had progressed to almost complete deafness. There was a discharge from the left ear for two or three months. This did not appear until four weeks after the injury and was not associated with earache. Hearing gradually became impaired on this side also, but to a lesser degree than on the right.

On admission, there is no discharge from either ear. The drums are retracted and thickened.

HEARING TESTS

RIGHT EAR	LEFT EAR
Loud shouts heard but not understood (a Bárány Lärmapparat employed).	Whispers not heard. Conversational tone understood at a distance of 12 inches.
Bone conduction is lengthened on both sides. Vestibular tests are normal.	

The naso-pharynx is filled with scar tissue. The pharyngeal orifices of the Eustachian tubes and the fossæ of Rosenmüller are not recognizable.

From the history of the onset of deafness, the appearance of the naso-pharynx, and from the X-ray localization, it is apparent that the bullet passed through the naso-pharynx and injured both Eustachian tubes.

The plan of treatment was to excise the scar tissue in the nasopharynx and, after the wound had healed, to locate the orifices of the Eustachian tubes with the aid of an electric nasopharyngoscope and to try and restore their patency by dilatation and inflation.

On February 24, 1920, the patient was anesthetized and placed in the Trendelenburg position. The soft palate was retracted by means of small rubber catheters passed through each nostril and brought out through the mouth.¹

The tissues of the naso-pharynx were infiltrated with procaine and adrenalin in order to control bleeding partially, and to diminish the reflexes that invariably occur during operative procedures in the naso-pharynx.²

Even under direct vision the orifices of the Eustachian tubes could not be recognized. The scar tissue was removed by sharp dissection and with sharp nasal rongeurs. The bleeding was controlled wherever

¹Ether anesthesia was given through the mouth-gag used for tonsillectomies. A good illustration of it is to be found in an article by Crowe, Watkins and Rothholz in *The Johns Hopkins Hospital Bulletin*, 1918, XXVIII, p. 18, Fig. 9.

²When adenoids are removed even under light ether anesthesia there is almost invariably an interruption of the respiratory rhythm. We have had one death due to spasmodic closure of the glottis and to arrested heart action, presumably caused by stimulation of the vagus. This occurred during the removal of a large metallic foreign body that had been present in the naso-pharynx of a child for several months.

possible by the introduction of catgut sutures. The naso-pharynx was not packed.

The post-operative course was uneventful until the fifth day when a bronchopneumonia developed on the right side. The patient was transferred to the medical service where he remained until March 28, 1920, at which time he had completely recovered. Nothing was done to the naso-pharynx during this period with the exception of frequent irrigations with sterile normal salt solution, followed by the introduction of sterile albolene into each nostril.

During the next three months about three hours a week were devoted to the localization and dilatation of the Eustachian tubes.³

³For several years we have used the electric nasopharyngoscope for the introduction of the catheter and the dilatation of strictures of the Eustachian tube. If sufficient time is devoted to the anesthetization of the nose, naso-pharynx and the Eustachian tubes, the entire procedure may be carried out with but very little discomfort to the patient.

The floor of the nose, the lower border of the inferior turbinate and the naso-pharynx on each side are cocaineized. For this purpose we prefer to use a small piece of cotton on an applicator, with a 20 per cent. solution of cocaine, rather than to use a weaker solution in a spray. If the excess of cocaine is removed by pressing the cotton between two layers of gauze there is no danger of poisoning in this method of anesthetization.

The nasopharyngoscope is then introduced along the floor of the nose on one side, and the Eustachian applicator, moistened with a 20 per cent. solution of cocaine, is passed through the other nostril and into the orifice of the Eustachian tube. If left in place for five minutes, the Eustachian tube will be sufficiently anesthetized to permit the catheterization and subsequent passage of bougies without pain.

The catheters and the soft rubber ear syringe used for inflation are sterilized by boiling. The whalebone bougies are placed in a 1-1000 solution of bichloride of mercury and are allowed to remain for 15 minutes. The tip of the bougie is dipped into sterile olive oil or vaseline in order to render its passage along the Eustachian tube less irritating. Even with the magnification and the brilliant illumination of the naso-pharynx that is obtained by the use of the nasopharyngoscope, it was extremely difficult to find the orifices of the Eustachian tubes.

On the left side there was no Eustachian cushion and for many days we were unable to localize the orifice of the tube. On one occasion, however, a small plug of mucus was seen to be forced out of a minute opening during the act of swallowing. The smallest sized catheter was then placed directly over this area and by inflation and the use of the diagnostic tube it was demonstrated that this small opening led into the Eustachian tube. Immediately following this first inflation there was marked improvement in hearing on the left side. It is noteworthy that the improvement was permanent and the

deafness did not return in two or three days, as is usual in chronic inflammatory conditions of the Eustachian tube.

On the right side the Eustachian cushion was present, but attempts to inflate and to pass bougies indicated that the tube had been divided a few millimeters above the pharyngeal orifice. The pinpoint opening of the tube was located only after many hours of observation, probing, and attempts to inflate. Once the opening was located, however, inflations and dilatations with whalebone bougies rapidly restored the hearing. From attempts to pass bougies it was apparent that there was a further stricture higher up the tube. This was probably due to the fact that the bullet had entered the right side and caused more extensive damage to the right tube than to the one on the left.

After three months of treatment the patient is able to hear from the balcony of a theatre for the first time since the accident. Ordinary conversation can be heard from any part of the room. A low tone tuning-fork, C₂₅₆, can be heard by air conduction on both sides. Air conduction and bone conduction are about equal in the left ear (June 21, 1920). The hearing in the right ear still remains slightly impaired and bone conduction is a little better than air conduction.

With this improvement in hearing there has been no appreciable change in the appearance of the tympanic membrane on either side.

It is possible that the scar-tissue will ultimately contract and again produce stenosis, but subsequent treatments should not be more difficult than in ordinary strictures of the Eustachian tube. The point we wish to emphasize is that it would have been impossible to have benefited this patient in any way without the use of the electrically lighted nasopharyngoscope.—*Johns Hopkins Hospital Bulletin*, Dec., 1920.

A NEW LOCAL ANESTHETIC DISCOVERED

The University of Illinois announces that it has developed a new local anesthetic, useful as a substitute for cocaine and in many ways superior to cocaine, which will eliminate the necessity of using a habit forming drug which causes so much trouble to physicians and to the government. The work was accomplished in the chemical laboratories by Professor Roger Adams and Dr. Oliver Kamm.

This new product has by practical tests by Drs. Suker and Gradle, eye specialists in Chicago, and in several hospitals and clinics in the country proved useful as a substitute for cocaine in local anesthesia of a mucous membrane.

A list of the valuable properties of this new substance as compared to cocaine, as announced by the University, are these:

This product may be sterilized by heating its solution to boiling point with no danger of decomposition whereas cocaine can not be sterilized by boiling the aqueous solution;

A two per cent. aqueous solution may be instilled into the eye and anesthesia is produced so rapidly that the operation can be performed at once. From four to five minutes are required where cocaine is used;

The new substance produces less irritation than cocaine, it produces no dilation of the pupil and it does not dry up the secretions of the eye;

It has antiseptic as well as anesthetic properties.

Procaine, formerly known as novocaine, has, up to this time been used extensively in place of cocaine where the aqueous solution is injected. Where the anesthesia must be caused by surface action on the mucous membrane in eye, nose and throat operations, however, novocaine is ineffective and cocaine is generally used. It seems now that this new product of the University of Illinois will supplant all such uses of cocaine.

SINCE UPLIFTERS HAVE BEGUN TO REGULATE THE PRACTICE OF MEDICINE MUST ALL DOCTORS BE LAW BREAKERS?

The average physician, we would fain believe, is not naturally a criminal, but since the uplifters have begun to regulate the practice of medicine and to determine what remedies the doctor can prescribe and in what doses he can give them, he is rapidly and perforce becoming one. He is forbidden to prescribe narcotics in certain cases and in others he must be careful not to give them too frequently or in doses which the lay bodies who are watching him may decide are too large. Moreover, he can't prescribe narcotics in any case unless the revenue departments, national and State, sell him permission to do so, and then it is only after he has filled out half a dozen blanks and gone through various tedious formalities that the pharmacist dares honor his prescription. And even then he may find that some commissioner or other has made a new ruling so that he has become unwittingly a law breaker over night. A physician of this city, a practitioner of over thirty years' activity, writing in the *New York Times*, says that there are two sets of narcotic laws and sixteen regulations based upon them, but he overlooks the fact that these sixteen regulations refer to only one of the laws, and how many regulations there may be tomorrow or the next day, when some dreamy clerk wakes, up with a new idea, relating to the other law nobody knows. The writer truly remarks that if all the laws were strictly enforced—and they might be any day if some deputy

were suddenly to realize that he or she was not earning his or her wages—only a retired physician would be safe from jail.

Then there is the prohibition law. Any well man in New York City, and we presume elsewhere, who wants a drink and has the price can get it, but the sick man whose health or life may depend on it can whistle with what breath is left in his body and won't get it. Owing to the vexatious formalities required of a physician seeking for a permit to prescribe alcohol, to say nothing of the insults to which he is liable from some swollen headed clerk or spy, comparatively few practitioners are able to prescribe the drug for their patients, and even these are restricted in the amount which they can order, the dose being limited to an average of twelve teaspoonfuls a day. The correspondent of the *Times* above referred to, claims that he is really not criminal in his instincts or habits, but says that he cannot practice his profession without doing perhaps petty but really criminal things. He states further that he has been trying for nearly nine months to get a permit to have pure ethyl alcohol for surgically external use in his office. "I have been visited," he writes, "by two inspectors, who examined my professional outfit and asked about my professional career. I have signed and sworn to various documents testifying to my correctness of life, etc., but I have no permit and must infer I am unfit." He doesn't say so, naturally, but we have little doubt that he has obtained the alcohol he needs by some criminal act. It was William H. Seward, we believe, who said that "there is a higher law than the Constitution."

There is a bill before the New York Legislature repealing the narcotic drug law of the State, which we hope will pass. (It is the Lord bill to which we refer, and not the Smith-Fearon bill.) The Harrison law with some amendments will be sufficient to restrict the traffic in these drugs without forcing the mass of the profession into the ranks of evaders, if not breakers, of the law.—*Medical Recorder*. March, 12, 1921.

EVERY MAN HIS OWN DOCTOR; NEARLY EVERYBODY IS TAKING A HAND IN OUR WORK

THE WAY THEY DO IT IN MADISON COUNTY, NEW YORK—THEY HAVE THEIR SENATOR AND REPRESENTATIVES AT THEIR COUNTY MEDICAL SOCIETY MEETING

At the Madison County, New York, Medical Society at Oneida, December 3, 1920, Dr. George W. Miles, representing the legislative committee of the society, spoke as follows:

Nowadays we appear to have about reached the time

when the slogan "Every man his own doctor" would apply. Nearly everybody is taking a hand in our work. The drug store clerk practices medicine, specializing in venereal diseases and being known by that most reprehensible term, "Doc." Only last week I came across a case where a layman with no medical training whatever brought out his blood-pressure apparatus and applied it to a wondering patient. To be sure he took the pressure wrong, as I later discovered,—but everybody's doing it. The child welfare clubs take part—the visiting nurse is in it—and many and various are the workers who are coming to our aid, or else hindering us, according to the viewpoint. Different branches of the federated women's clubs and social workers of all sorts have of late years been teaching the public self-medication and warped medical knowledge and in divers ways have brought injury to the public and embarrassment to the medical profession. In the case of some of these organizations they have been year after year appealing to the doctor in the name of charity for money with which to undermine him, and strange to say a good many doctors have been submitting to such demands. If these practices injured only the physician, we might be regarded as selfish if we protested, but the injudicious teachings of such agencies work a tremendous injury to the public at large. I could cite instance after instance from actual practice in proof of this. In the matter of such medical teaching and work the poet's dictum about a little learning being a dangerous thing is very apropos.

Also now we have the various cults in medicine. The social workers and others hamper us in the practice of medicine at home and the cults trouble us at Albany. We have Christian Scientists and Naturopaths and Osteopaths and Chiropractors and many other sorts and kinds too numerous to mention, and with new ones constantly springing up, and all endeavoring to practice medicine and all trying to get legal recognition at Albany. There has been an almost endless list of these people but I have mentioned the sorts at present most talked about and especially those who are talking most about themselves. Now it requires no very great amount of study or investigation to ascertain all that there is about these different kinds of imitation doctors. They are almost invariably men without ordinary English educations, to say nothing of a proper grounding in the preliminary branches of study along scientific lines. No one of them has ever received any scientific education whatever. They depend upon advertising. These different cults are simply composed of people who have adopted a get-rich-quick plan. Some man thinks he sees a quick route to wealth by the medical road. He cannot afford to spend eight or ten years in medical training and neither has he the price. Hence the correspondence school of a few weeks and the chiropractic and other methods. Entirely no education is needed and very little money and, presto—he is on his way. As I have said, the point ought to be clear enough to anyone and yet the chiropractic bill of last winter while it did not become a law passed both the Senate and

Assembly. On the evening before the chiropractic bill came to a vote last winter a member of the Assembly from Cortland County met a physician whom he knew in the Hotel Ten Eyck lobby and said to him: "What shall I do about this chiropractor bill? I don't know a thing about it. Not a single physician has said a word to me concerning it. I guess the physicians of Cortland County are asleep." Now this coming winter you gentlemen who represent us will not be able to say that we of Madison County have been asleep. We are letting you into the innermost secrets of our hearts.

We physicians claim, and we can see no injustice in our claim, that everyone of these men of these different cults who would set themselves up as doctors should be compelled by the state to first undertake the same course of preliminary study and scientific training as we have been compelled to undertake; to pass the same examinations in the foundation branches of medicine leading to the degree of Doctor of Medicine; to pass the examination for license required of us by the state; then when they have done just what we all have to do, if they should desire to manipulate the spine for a case of cross eyes, as has been done in this city, or if they wish to say a prayer for the cure of diphtheria we will not offer a word of remonstrance. But obviously if a man has been compelled to properly prepare himself in medicine he will not wish to undertake any short cuts. It will not do for these people in response to such proposal to tell you that they do not wish to become doctors; that they do not wish to practice medicine; that it is something else entirely that they wish to do and that therefore they should not be subjected to all these hardships in way of preparation, because as a matter of fact they do practice medicine. Unfortunately for everybody concerned the law has never defined just what the practice of medicine is. Every time a court proceeding occurs some judge defines it anew for himself. Therefore I have a right to say that every individual who by anything which he says or which he does or which he gives or advises to be taken holds himself out as able to alleviate or cure the ailments of any human being is engaged in the practice of medicine. The physician who reduces a dislocation of the shoulder is engaged in the practice of his profession of medicine. There will be no dispute about that. Then pray what is the man doing who reduces a dislocation of a vertebra—if he does? It is not necessary to haggle over legal technicalities as to what does or does not constitute the practice of medicine. Common sense and common judgment tell us that these people do practice medicine and are practicing medicine every day. To what does all their advertising tend if its object is not to attract as patients those who have or think they have some physical ailment? If there is anything unfair about treating all and everybody alike as to educational requirements and training before the state may recognize them as doctors then we are unable to see it.

But the matters I have mentioned do not constitute

all the troubles which the doctors have. There are frequently bills at Albany of different character and from entirely different sources yet quite as antagonistic and quite as injurious to physicians. For the last two or three years we have been wrestling with the Health Insurance bill supported by different interests about the state and opposed by as many in addition to the opposition of practically every physician in the state. This bill was an Utopian scheme which seemed to appeal to many dreamers but which had already been tried years ago in European countries and had met with failure there. At the present time the Health Insurance bill seems to have fallen by the wayside. But this winter we will no doubt have another which is in some ways a substitute for the former bill but which is still farther reaching in its possibilities for harm to the general practitioner of medicine. It is concerning this bill that I have been particularly asked to speak to you today. I refer to the so-called Health Center bill. This bill is being vigorously opposed by the medical profession of the state although it apparently originated in and is being advocated by the State Department of Health. This piece of legislation is the one which interests the medical profession most just at the present moment. Exactly the form it will take at the coming session of the Legislature we have no means of knowing other, than that it will no doubt be modelled upon the health center bill of last winter introduced in the Senate by Senator Sage of Albany and in the Assembly by the Hon. Mr. Macchold of Jefferson and known as the Sage-Macchold Bill. In this bill it is proposed to raise by general taxation the considerable sum of \$750,000. The object is said to be to furnish the people of the state and especially those of the rural districts with more perfect and complete medical service through the establishment at different points throughout the state of so-called "Health Centers." It is proposed to furnish at these points hospitals and pavilions for the treatment of tuberculosis, also for mental and nervous diseases, maternity hospitals, X-Ray and chemical and bacteriological laboratories, dispensaries and in fact pretty much everything in the way of medical and surgical service and the expense of all this to be covered by the appropriation of the bill. There are some physicians in the state with a fondness for figures who have given their attention to this and who tell us that to provide all the buildings and paraphernalia promised in this bill for every 50,000 of population as is proposed would require the expenditure of at least \$20,000,000. As argument in favor of this bill it is asserted that there are not sufficient doctors throughout the rural districts of the state anyway. That those who are there are not exactly what they should be in the way of efficiency is largely implied though not so generally told outright. All the hints and implications and assumptions and accusations which have been advanced along these lines the medical men of the state deny in toto. We say that there is no community in the state which does not have medical practitioners a plenty within reasonable calling distance. We also

claim that they are good and thorough and efficient men, men of good training and wide reading and large experience. In the County of Madison in addition to this we have plenty of hospitals, many X-Ray plants and a good bacteriological laboratory furnishing quick and free information to any physician in the county. We claim that neither the people of the rural districts nor anywhere else need so much money expended by the state in free medical service. We look upon any such plan of providing medical service as an unwarranted, unnecessary and very foolish matter. We believe that it would not be approved by the people at large when they came to understand it. You cannot so readily make a charity object out of a man who is earning a good income. When a man is not able to employ for his family when ill the physician whom he prefers, and in whom he has most confidence, and whom he has always for a lifetime employed, but must turn to some other man selected by a state department who can be had for a nominal sum or for no sum at all, he is not going to be satisfied, and he should not be. This bill is far reaching in its power for harm to the general public as this public is related to the general practitioner of medicine.

Again, this bill is unjust to the cities of the state. It is not claimed that they especially need any such thing or that they will get much out of it. But they must bear an equal share in the burden of taxation. Nobody seems to be clamoring for this bill. If any individual, or any combination of people, or any organization has asked for this bill I have not heard of it. Nobody wants this bill but the State Department of Health. The State Health Bulletin, the organ of the State Department, in a recent number, makes the assertion that "Free health will soon become an actuality"; and by this it is explained is meant that "Rich and poor alike shall have the most perfect degree of health"; and incidentally the expense will be borne by the general taxpayer. To be sure the hard working doctor of a lifetime might be humiliated, or he might be bankrupted, but perhaps this should not be mentioned. Maybe we should never have become doctors anyway. I begin to think we shouldn't.

This health center bill of last winter adjusted the fees of doctors through a governing board appointed by the Board of Supervisors. It not only adjusted the fees but it had pretty much all the charge of medical matters in their entirety at the points and in the districts where these health centers were to be established. And how was this governing board constituted? Of two physicians and five laymen. Now we submit that any medical bill taking charge of everything, including the adjustment of physicians' fees, should not have its boards dominated by laymen. We believe that a majority, at least, of any such board should be physicians. Any such legislation as this could not do anything but disrupt and disorganize the medical profession. As I have intimated before, this kind of legislation, while new in America, has been tried and is now being tried in European coun-

tries and always with disastrous results. Unable to live on the starvation fees awarded them under the Austrian health insurance act four thousand physicians in Vienna last month went on strike. This is an indication of what our own doctors in this country may look forward to if political and social uplifters are permitted to socialize the medical and surgical treatment of our sick. What we see behind all the laws of this sort is that ultimately the physician will be robbed of his individuality and will become merely an agent of state medicine. If the profession of medicine is to continue as an independent calling instead of becoming one of the public utilities under the control of some state department, it is high time for the county organizations in medicine to register in a public manner their opinion and sentiments concerning all manner of health insurance and health center acts and it is high time for the individual members of these societies to take just as much interest in the activities of medical legislation at Albany as they are doing in the every day work of their business.

The question in this whole matter is not so much, however, as to who is harmed or who is politically advanced. The real point is that the legislation proposed is bad in principle in that it nearly accomplishes the fact of state medicine. It is a dangerous approach to socialism. In last winter's health center bill centralization of power is carried to the limit. These are the reasons why all of these bills should be defeated.

I trust the idea does not arise that only my own sentiments are being voiced. I have not the least doubt that the signature of every practicing physician in Madison County can be had to a petition asking that the health center bill or any bill of this character be killed. Before a legislative hearing last winter representatives of twenty-four medical societies of northern New York gave expression to the sentiment that while the Legislature might pass the bill at that time under consideration for the socialization of medicine in the State of New York it could never compel doctors of the rural districts to work under it. This they pledged themselves not to do under any circumstances. At the recent special meeting of the Madison County Medical Society the following resolution was passed without a dissenting voice: "It is the sense of those here present that the Madison County Medical Society is unalterably opposed to the legislation known as the Sage-Macchold bill, and that it is respectfully requested of all delegates who have been appointed to represent this society or who may hereafter be appointed to represent it during the coming session of the Legislature to use all honorable measures in their power to prevent the enactment of this law or of any law of this character however the same may hereafter be amended." At this same special meeting this present special legislative committee of five was also appointed for the purpose of conferring with you, our representatives in the Legislature.

All modern advances in medicine and surgery have come through the medical profession. That these

advances have been of value to the world will not be disputed. All advances in the future must come if at all through the same channel. But if every winter the doctor must drop his work for a time in order to fight for his life, if at every session of the Legislature the medical profession is to be made the football of politics, then I fancy that there will be few advances. We are of the firm and confident opinion that the initiative in all changes in medical laws, all improvements in the medical affairs of the state, should fall to that body which is best fitted to take charge of it by training, by reading, by knowledge, by experience, the organized medical profession of New York State.

We cherish the hope that during the coming session of the Legislature, while your attention is engaged with the varied interests of the people of this state, you will not entirely overlook the important interests of the 15,000 physicians of the state, and that you will especially remember the interests of your friends of the Madison County Medical Society.

AUTOBIOGRAPHY OF A STAMMERER

EDITED BY JOSEPHINE MOORE RICHARDSON

Sixty-nine years ago today (August 20, 1880) my twin sister and I were born in Woodville, Mississippi. Our home was neat, plain, and comfortable, the home of pioneer cotton-planters. My father was very religious, a follower of John Wesley, and he insisted on plainness of dress, habits of economy and industry. Now, my paternal grandfather had not these ideas; he was wealthy, a power in the community, and he lived well and luxuriously. Being the eldest son and grandson, a double interest centered in me, and my earliest recollections go back to my grandfather's home, where I had the petting and spoiling of five unmarried uncles. My young life was about equally divided between the two homes—one of wealth, one of simplicity in all things. I was far better satisfied with life at my grandfather's, where, like my uncles, my grandmother and grandfather anticipated and gratified every wish or fancy. I dared not hint of my ruffled shirts at my home.

My father was a good man, noble-hearted, but impulsive, and suddenly he decided I must spend the greater part of my life at home; he distrusted the luxurious surroundings of his father's home. This decision was a blow to me; for, though but seven years of age, I had many plans for my future. One was to be an orator. Under the persistent tutelage of my uncles, I had become rather famous in the community for my oratory. I fully believed the statement that Cicero and Demosthenes were nowhere in comparison. Why, before knowing my alphabet I had memorized "My voice is still for war"; "You'd scarce expect one of my age"; "Friends, Romans, countrymen," and other school-boy selections. These I was called upon to deliver on company occasions at both my homes. My wonderful power of memory, speech, and gesture would cause tears of joy to spring to my relatives' eyes. Indeed, such was my local fame that

the principal of the Jackson Academy, in our county, prevailed on my father to let me open the school exhibition.

This proved a memorable occasion, and all the incidents connected with it are still fresh in my memory. I had been sent to the academy the day before for rehearsal, and in a single night had distanced Jonah's gourd, in my own estimation, at finding myself among the big lions of the school.

The exhibition came off next day. The stage was curtained and covered with evergreen, in the midst of a beautiful forest, and raised about four feet from the ground and carpeted. In front of the stage was seated the whole county. People had poured out; it was an immense gathering. The little bell tinkled, the curtains parted, and the venerable president came forward, saying, "Let us pray." After the prayer he said:

"The exhibition will now be opened by a speech from Francis Richardson."

I was standing with the other boys, who cried, "Go ahead, Brutus!"

I walked out to the front of the stage dressed in the clothes I wore at my grandfather's (those clothes were a great concession), as if the "world and the fullness thereof" were mine. I gave my best bow, the applause commenced, and I had to bow again and again before I could begin, "Friends, Romans, countrymen." My young voice must have had a clear ring and compass, for I heard it said that it reached the furthestmost verge of the audience.

The time is long spent, the scene afar, yet still I can hear the voice of the old principal, Rev. Mark Moore, as he said: "Francis, you may make a great man, but you will never make a speech that will do you more credit than the one you made today."

Here was the beginning and end of my young oratory. The tree in limb and foliage was beautiful, but a worm had girdled its tap-root; the main support was going, going, gone. With me, this "worm" was a young negro servant in our home. He was one of the most heartrending stammerers I ever heard. Why I alone of all my brothers and sisters should have been the victim none can tell. [One brother did stammer slightly, however.—J. M. R.] To see this sufferer in the agony of being delivered of a word roused my compassion; I often found myself trying to help the boy.

Who that has passed through the world with his eyes open does not know the contagion of stammering and stuttering. It is barely possible that in my own case there may have been some predisposition to speech defect; for my mother, who had one of the softest, sweetest, most even-flowing voices I ever heard, would suddenly stop when she had to say "Richardson," but I know of no other letter besides "R" at the beginning of a word which gave her trouble. Be this as it may, one thing is certain, my affliction got fast hold of me before any one, even myself, was aware of it.

Looking back on half a century of moral crucifixion, my opinion is that it was the result of a sudden loss

of confidence which produced the catastrophe, followed by unfortunate treatment of the infirmity, due to ignorance of the cause and effect; all of which has since been discovered by science. [Of course, the child had been highly excited by public attention; overstimulated at an early age; and was longing to return to his grandfather's home. Hence it is small wonder that his nervous system was unstrung.—J. M. R.]

At the time I mention, my father was absent from home, and on his return he was much exercised over what he thought was perverseness on my part. So, with the best motive in the world, he took the very worst plan to relieve me. As I have said, he was very impulsive and positive, and whenever he tried to correct me he became nervous, which made matters worse. No doubt whatever but that he thought all he did was for my good; for in after years, when I saw what he suffered on my account, I have no reason to doubt but that he would have given his right hand if that would have lifted the curse from his first-born boy. As I see it now, in the light of present-day science, I am fully satisfied that if a proper course had been pursued with me, or if they had let me go back to my grandfather's, the fearful calamity might have been avoided; but it must be remembered that remedies for this, the most heart-crushing of all human infirmities, were then, in a degree, unknown to the world.

With me it was a festering sore that only grew worse from irritation, and in a few months my case was pronounced hopeless, and I but ten years old! My first schooling was at home; my gentle, soft-mannered mother taught me. Alone with her, I could say my lessons and hesitate but little; but at the age of ten I was regularly entered on the list of school-boys, and the iron entered my soul.

Some of my teachers were kind, gentle, and considerate; others were brutal; they whipped, scolded, and abused me for not pronouncing words—words which were impossible, even if there had been millions in it. My father, engrossed in his business affairs, was not always aware of how I suffered, and, when aware, still hoped my stammering would wear off, when all the time it was wearing on.

It was a great oversight ever to subject me to the usual routine of school—to be crucified in a spelling class between thieves, as it were; to be turned down foot because I dared not pronounce a word or letter I knew so well! But it was out of doors at playtime when most of my trials and tribulations came; for with me it was a word and a blow, often the blow first; that came easier for me. I realize how hard it is to refrain from laughing at one who is struggling to get out a word, but it is even harder for the struggler to refrain from knocking down one who is laughing at the struggle.

Nor was it in school alone that my trouble came, but out in the world, in social life. To be asked at a friend's table if I preferred coffee or tea and know I could pronounce neither word, that was crushing indeed. To be asked my own unpronounceable name in

company, or to have to introduce people—why, it took the courage of the famous six hundred. Better meet a highwayman with “stand and deliver” than a traveler inquiring the way.

Charles Lamb, the worst stammerer in history, had the above experiences. How sweetly he bore them, too! I would not like to record how often I was on the verge of suicide. With me the worst stage was about my fifteenth year, when, though well prepared for college, my parents could not bear to subject me to new scenes or torture and humiliation. My father was now using his ample means to alleviate my condition and was most tender to me.

I was sent to an institution which professed to cure stammering. This was Dr. Yates' institution in Natchez, Mississippi, in 1827-29. Though I remained there some time and was relieved in speaking, I was far from being cured. Perhaps Dr. Yates advised it, but I was not sent back to my old school. I studied at home, under the direction of the neighboring physician and the minister, both of whom were excellent teachers. Reading was my greatest pleasure. Many of our neighbors had good libraries, and the gems of English poetry I learned then still remain in this storehouse (decayed as it is) of memory.

Up to this period of my life, my twin sister and my mother were in full sympathy with me; without them I shudder to think what I would have become. Later, my mother was taken from us, and while a blow to all of us, to me it was hardest—to me the stammering boy, who when most oppressed and depressed needed a mother's understanding love to soothe the evil spirit.

For two years after her death I helped my father on his sugar plantation, but then I heard of Professor King, an English elocutionist, established in Baltimore, who advertised the treatment of stammering. “No cure, no pay.” I determined to take his treatment.

In Baltimore I found a large number of pupils and we all worked hard for three months. This was in 1832, and again I found myself benefited but not cured. The main feature then for those afflicted as I was, consisted in “self-control,” “regular and full inflation,” “speech audible and slow.” Any speaker will be benefited by these rules, and the intelligent stammerer learns to have his quiver full of words meaning the same thing; so if one does not come handy, another does.

While my stammering was not now as painful for others as it had been, it was still too bad for me to become a lawyer, as I had intended. I knew no client would let me plead his cause or any judge listen to my stammering. I therefore turned my leisure moments to writing and, to some extent, still follow the practice.

My stammering had not kept the woman I loved from marrying me, and with our babies we were settled down on a Louisiana plantation; but in the year 1850 a call came for me to represent my party (Whig) in the legislature. I was elected and went to Baton Rouge, Louisiana. It was the first session held at

Baton Rouge, in the New State House, and I believe it was generally considered to have been the strongest body of representative men ever assembled in the State.

My speech was now remarkably improved, but there was enough of the thorn left to make me realize the embarrassment of my position. Still, I must talk and represent the people who had chosen me. I could not read aloud, but soon I found that on my feet, with full voice and gesture, interested by a subject. I could talk; I even had fluency.

The Speaker died suddenly, and I was urged to be a candidate for the vacancy, but this I dared not accept. I positively refused, for reasons best known to myself, but which I did not care to parade before the State of Louisiana. Then, too, I felt I could be more useful from the floor. With the help of my brother, who had become blind by accident, I succeeded in having passed a bill for the building of the blind, deaf, and dumb asylum. When the bill came up for its third reading there had developed opposition to it, when, springing to my feet, I made what I know and what others told me was the best speech of my life. The bill passed by a large majority. My next best speech was to urge the completion of the Chalmette Monument, commemorating the Battle of New Orleans. This bill also passed.

[When my grandfather was eighty years old he and I climbed to the top of this monument. He lived to be eighty-nine and showed no signs of breakdown (besides deafness), till eighty-five. As to his stammering, I wish to stress the fact that in childhood I did not notice it. Later I did become aware of a slight hesitation, not unpleasant, however. At the age of eighty my grandfather recited to us a long poem, “The Misanthrope,” and hesitated but twice in its eloquent delivery. I have given this autobiography with almost no change. I have simply eliminated matters which had no concern with his defect. I trust this life history may encourage some sufferer to rise above a terrible handicap and become a leader of men.—J. M. R.]—*Volta Review*.

THE GROWING ENSLAVEMENT OF THE PROFESSION OF MEDICINE

Two correspondents in this issue of the *Medical Record* call attention to two instances of governmental encroachment upon the freedom of medical practice. In the news column will be found a reference to other instances, especially to an attempt which will be made by the prohibitionists, emboldened by their assumed success in cutting off the use of alcoholic beverages, to forbid the use of alcohol not only in patent medicines but also in legitimate tinctures and elixirs. Under the present interpretation of the Eighteenth Amendment a physician can prescribe only one pint of whiskey or brandy every ten days for each patient. If a patient with septic fever needs any alcohol at all he needs more than six drachms a day, but that is all the lay regulators of medical practice will permit him to have. If a man in the country is seized with

renal colic twenty miles from a drug store and his companion happens to be a physician, the latter cannot telephone to that drug store for morphine, but must write a prescription on the official blanks, which he probably has not with him, and then must go himself to the drug store and prove his identity before he can get the drug, his friend with renal colic meanwhile having a good time by himself, twenty miles away.

Whether the compulsory reporting of venereal disease is for the good of the community is a question as to which there are still two sides. Whether a physician who is uncertain regarding some provision of the wretchedly drawn Harrison law shall put off prescribing for his patient until he can have the point decided by the courts, or shall prescribe as common sense and his conscience dictate, is a point for him to settle at his own risk. Every year an attempt is made in the New York Legislature to pass a bill compelling licensed physicians to register themselves each year and pay a tax under penalty of losing their right to continue the practice of their profession. The antivivisectionists and the anti-vaccinationists we have always with us. Nearly every year some new group of "healers," with little education or no education, are recognized by some State Legislature and are made by law the equals of medical practitioners who have given years of study to qualify themselves to treat the sick.

Who is to blame for this every-increasing interference with the liberty of medical practitioners? If the medical societies of the land—county, State, and national—were conducted as they should be and exercised the influence that they readily could if their officers were in general more alive to their responsibilities possibly a halt might be called to this meddling by politicians and cranks with the practice of medicine.—*Medical Record*, 1-1-21.

NURSING BY TRADE UNION METHODS

No person can afford to be sick, but the average family is almost bankrupt when forced to pay a trained nurse the present rate of fifty dollars a week and board, to say nothing about the doctor's fee and incidental expenses. And the worst of it all is that many of the trained nurses are not rendering the services that they should render. They are acquiring the attitude of so many of the laborers in trying to get the highest compensation and yet give the least in return for it. Not a few of them lose track of the humanitarian side of their work, and no matter what the circumstances they are refusing to be on duty more than a few hours at a time and they designate their duties, when the hours shall be, and if the case requires much attention they insist that there shall be two nurses on the job. Another nasty trick which some of the so-called best trained nurses are employing is to refuse everything but the easy cases, and, worse still, to refuse to take even those unless in the hospital. We have known of numerous instances where patients desperately ill with an infectious disease were unable to get a single nurse out of a half

dozen or more who were idle and waiting for a job. There are some nurses who, like the doctors, go whenever called and with no questions as to the character of the case or whether or not the patient can afford the ordinary conveniences; but it is lamentably true that not a few of the trained nurses have lost sight of the humanitarian side of their work entirely. In this connection perhaps a word of criticism of the hospitals is justified in view of the fact that in so many of them it is getting to be a rare thing to find the floor nursing that prevailed a few years ago. It not infrequently occurs that if a hospital case requires anything more than the most ordinary care, the patient is advised that he ought to have a special nurse. No doubt the hospitals are in a measure excusable on the ground that they are crowded, and that there is a scarcity of nurses in training, but irrespective of that, there is a tendency on the part of not a small percentage of the nurses, both in and out of hospitals, to give less service than formerly, and it really is deplorable in view of the necessity for good nursing care for those who are sick. As a general proposition people, even those who are sick, do not object so much to what is paid for service if they obtain real service, but it is decidedly unfair to pay for service and not get it. Under no circumstances do we intend to include all trained nurses in this criticism, for we know that there are many who are living up to the highest ideals of the nursing profession, but there are so many who are not doing so that we feel that the nurses as a class should purge their ranks of those who are beginning to disgrace the nursing profession by practices that are no better than those of the worst trades unions.—*Indiana Med. Journal*, 1-1921.

"GROUP PRACTICE"—A MENACE OR A BLESSING

A most important innovation, commonly described as "Group Practice," has appeared in this country during the last two or three years. It was referred to incidentally by Dr. Billings in his discussion of "The Future of Private Medical Practice," in *The Journal* last week (February 5). This week we publish a plea for group medicine by Dr. Leonard, who is connected with a recently organized group (the Academy of Clinical Medicine) in Duluth. Groups under various names, such as clinics, academies, etc., are being organized over night, as it were, here, there and yonder, in towns of 10,000 or 15,000, as well as in the larger cities. The development of modern medicine, and especially of scientific laboratory diagnosis, may make necessary some such cooperative plan as these groups are intended to provide. Equipment, laboratory, roentgen ray and the like, which the average practitioner is not able to provide or to utilize satisfactorily, may thus be cooperatively provided. But what of the outcome of this new development? What of the physicians outside the group? Some evidently are seeing the advantages and are forming other groups—perhaps in some instances forced to do so in self-defense! Will not this mean group against

group? May it not be one more step toward the complete elimination of the general practitioner—of the family adviser—of him who heretofore has reflected to the public the altruistic motives of the medical profession? Does it mean that the family physician is being replaced by a corporation? Will commercialism or professional altruism control the management of these corporations, or groups if they are not incorporated? In thinking over this matter it is important to look ahead and see what influence this new development may have on the public. How will the average layman view it? Will he not prefer state medicine? We are asking, not answering, the questions—presenting but not attempting to solve the problem; for if we mistake not, it will prove to be a serious one.—*Jour. A. M. A.*, Feb. 12, 1921.

STATE MATERNITY BENEFITS WILL NOT
PREVENT DEATHS OF EXPECTANT
MOTHERS WHO HAVE BEEN MADE
UNFIT BY IMMORALITY, SOCIAL
EXCESSES OR HEREDITY

MISGUIDED ZEAL FOR PUBLIC WELFARE

The American people are forced to be on guard constantly to prevent being duped by pseudo-reformers and social uplifters of various kinds who without any very logical reasons for their attitude are attacking the public treasury, the public morals, and even the personal rights of individuals. As a matter of fact we are being surfeited with propaganda concerning social reforms, many of which are sponsored by a lot of half-baked enthusiasts who are desirous of securing publicity for themselves, or of necessity must get rid of a little superfluous energy which nine times out of ten might be expended to better advantage in another direction. One of the latest paternalistic schemes up for consideration is that relating to the state control of maternity which is only another aid in the establishment of state medicine. Maternity benefits are unnecessary in the light of what is being done by medical educators, boards of health, child welfare societies, and many other organizations, together with the cooperation of physicians, in efforts to protect the life and health of the expectant mother and her offspring. Maternity benefits will not prove a panacea unless we get at the cause of our mortality and morbidity record in childbirth. In reality the mortality rate in childbirth in a large measure is due to our moral and social conditions. Bad habits, wrong living, and heredity have brought about physical defects which are giving many of the fatal results to childbirth. Immorality opens the gates to all kinds of imperfections in social conditions. When morality is lacking there is nothing to check the tendencies to follow fashion regardless of the effect on health. The tendency toward pleasure madness turns night into day, depriving future mothers of the fresh air, rest, and sleep which they so much need. The general health and powers of resistance are lowered and expectant mothers who have burned the candle at both ends are utterly unfit to bear children. State maternity benefits

will not prevent deaths of expectant mothers who have been made unfit by immorality, social excesses, or heredity. The members of the medical profession are opposed to socialized medicine, and should oppose this new form of compulsory insurance which is allied to those that have been offered for health, old age, sickness, etc.—*J. of Indiana S. M. A.*, Feb., 1921.

FARMING OUT HUMAN INFIRMITIES FOR
SORDID GAIN

Which is the worse, he who perverts his fellows into evil ways and caters to their vices, or he who fattens upon their woes and farms out their infirmities for sordid gain? There is perhaps room for speculation upon the question, by experts in morbid moral pathology; though with, we should say, an inclination to regard the former as on the whole the less detestable. Vile as he is, the seducer is not always and essentially that most loathsome of things, a hypocrite.

These reflections inevitably come from observation of the recurrent attempts which are persistently made to prevent rational, humane, scientific and efficient treatment of sufferers from addiction disease by competent and benevolent physicians, and to deliver those most pitiable patients helpless into the clutches of harpies who would exploit their malady, torture their bodies and wreck their minds for the sake of the blood-money which might thus be wrung from them.

Here are the circumstances: There are thousands of persons of both sexes suffering—many of them innocently, some through vice or folly—from what is known as addiction disease; a disease as specific as smallpox or pneumonia, and as amenable to treatment; a disease, too, among the most painful and maddening to which human flesh is heir. These unfortunate persons can be dealt with in any of three ways. They can be treated by reputable physicians, as other sick people are, with a practical certainty of relief and a hopeful probability of cure. They can be committed to institutions, over the doors of too many of which might properly be inscribed the words which Dante saw above the gates of Hell. Or they can be consigned to the tender mercies of some commissioner, before whom they must daily appear to receive a dose of drugs which may relieve but will not cure, with a certainty that in a great number of cases they will seek supplies from illicit venders in the underworld of sodden vice and hopeless degradation.

Let us hear again the testimony of responsible jurists and physicians who are practically familiar with the subject, and who are strong enough to defy the reign of terror which has been imposed upon too many of their colleagues; given publicly and officially at the capital of the chief State of the Union. Said a judge of the Court of Special Sessions, before whom innumerable "drug cases" had been brought:

"The worst thing that could have happened was the registration rule, which drove addicts, good and bad, to stand in line before the Narcotic Commissioner's office, the objects of curiosity by occupants of 'rubberneck' wagons. Legislation restricting treatment of

addicts to institutions will increase underworld traffic and bring suffering to thousands who need the attention of their family physicians."

Said an eminent and authoritative physician, whose sense of duty was superior to fear of "discipline":

"All of us know who is behind bills barring physicians from treatment of addicts and involuntarily committing these addicts to institutions. It is the institutional proprietors who get wealthy at the expense of their patients. It is time the medical profession took cognizance of this fact. Addiction is a disease and can only be cured by treatment as a disease."

Said another distinguished metropolitan physician, who had given long and earnest study to the subject:

"The ruling of the Health Department has brought great suffering to respectable addicts and has made them the prey of charlatans and peddlers because physicians have been afraid to administer to the patients. It is time the clique of institutional physicians was exposed."

It is, of course, not to be suggested that all narcotic commissioners, or institutional physicians or proprietors, or private physicians who oppose the general medical treatment of addiction disease, are sordid, or inhuman, or corrupt. Let us assume that some of them, though misguided, are sincere and unselfish and benevolent. The fact remains that under the system which they advocate, the sufferer from addiction disease is doomed to an earthly hell, with the gates barred against hope for body, mind or soul.

The attempt to debar physicians from treating addiction patients centers in New York, for obvious reasons, but it extends to all parts of the country, and it seeks to make use of national as well as of State laws and municipal ordinances. It is as illogical and as essentially vicious as would be an attempt to debar physicians from treating typhoid fever or diphtheria or any other specific malady. One of these days it will be thus recognized, and the furtive and sinister influences which have promoted it will be disclosed—and will have their reward.—*Harvey's Weekly*.

Correspondence

SUCH STUFF AS DREAMS ARE MADE ON
Milwaukee, Wis., March 24, 1921.

To the Editor: Recently at a meeting of the Medical Society of Milwaukee County, a motion favoring the endorsement of an effort to persuade the city and county officials to pay to a privately owned hospital \$2,000 for the support of two obstetric nurses, "in order that poor girls who were about to be confined, might have proper care"—of course in that particular hospital—was voted down. Nevertheless, the "Conscript Fathers" voted the appropriation. The principal supporter of the motion was a well-known chronic

uplifter, whose voice has always been raised in favor of any and all attacks upon the taxpayers' money, for the furthering of any sort of dream, stated, with much gesticulation and almost with tears, that there were 'hundreds and hundreds of poor girls who went through the tortures of parturition without any attendance, either medical or by nurses.' It was a touching appeal and almost brought tears to the eyes of the "uplifter group" at the meeting. But what are the facts?

During the year 1920 there were 11,080 births recorded at the Department of Health. Of this number "four had no attendance by either midwife or physician." All of the four thus failing of attendance might have had aid from any one of an half-dozen institutions, or from almost any physician, had application been made. It is such stuff as the weepy uplifter drooled out of his system, that appeals to the uninformed public, and upon which much of the present agitation for the thousand antidotes for imaginary medical ills is founded. The "stuff that dreams are made on."

H. W. B.

NEW YORK DOCTORS BRING INJUNCTION TO RESTRAIN THE NEW YORK STATE NARCOTIC DRUG COMMISSION

New York City, March 17, 1921.

To the Editor:—Physicians and druggists everywhere throughout the United States will be interested in the action of the Professional Guild of King's County in deciding to ask for an injunction restraining the N. Y. State Narcotic Drug Commission from enforcing recent rulings of the department compelling the use of official triplicate blanks for all prescriptions containing narcotic drugs. This course was decided upon at a meeting just held in Brooklyn which was largely attended by the doctors, druggists and dentists who make up the membership of the Professional Guild. At present this ruling makes the doctors of the State technical violators of the Law at least as few of them have provided themselves with these blanks, believing that under a proper construction of the Harrison Law they are permitted to use the non-official blanks in their daily practice.

It is the general consensus of opinion that the Professional Guild is entitled to great credit for

its action in this matter. Properly speaking this course should have been taken by the organized medical bodies of the State, which however, with one exception have permitted this ruling to go uncontested. This is true also in a measure of the State Officials responsible for the acts of a subordinate official who under the Law is empowered to make needful and helpful regulations in the conduct of his office. Needless to say such regulations would not be universally disregarded by a class of citizens represented by the physicians and druggists of this State if they did not endanger the safety and lives of those to whom they are bound to protect even at the risk of their own safety and welfare. This inaction cannot be excused either by the fact that bills are now before the Legislature abolishing the office of Narcotic Drug Commissioner.

I'ven if this be the case such conduct should not be condoned indefinitely until such time as the offender is legislated out of office for reasons of economy only when there are many more substantial reasons for taking action upon the administration of this office at the present time.

John T. Davin, M. D.

Executive Secretary, New York Medical Association

CHRISTIAN SCIENTISTS CLAIM THEY REPORT CONTAGIOUS DISEASES

HOW DO THEY DIAGNOSE DISEASE?

CHICAGO, MARCH 15, 1921

To The Editor—The March number of The JOURNAL contains an article by James L. Reat, M. D., in which a statement appears to the effect that Christian Scientists and others are permitted "to treat both epidemic and infectious diseases without making reports of their cases."

The writer is not in a position to speak for the "others," but in behalf of Christian Scientists is able to say that they know of no permission being given them to ignore the rule of the Illinois State Board of Health which requires the reporting of contagious diseases.

The names of reportable disease as listed by the Illinois State Board of Health are supplied by this office and one of our bulletins which deals specifically with the subject is in the hands of every practitioner and thousands of other persons in the State. Christian Scientists are well informed about reporting contagious diseases and

approach as near one hundred per cent. of obedience in making reports as any class of citizens.

As the writer of the article made statements not in accordance with the facts, I am persuaded that you will permit this correction to appear in the next number of The JOURNAL.

Sincerely yours,

LEE WHITE,

Christian Science Committee on Publication for Illinois.

Note:—How can Christian Scientists diagnose disease when they have had no medical training? The diagnosis of disease is a very material matter. It cannot be done by absent methods, it requires scientific skill and training. The differential diagnosis of disease, too, is sometimes a difficult problem even for the trained diagnostitian, for instance, in diphtheria the diagnosis cannot always be made by clinical examination and we have to resort to laboratory methods to confirm or disprove the diagnosis in a goodly percentage of cases.

Public Health

TYPHOID CARRIER ISOLATED

When six cases of typhoid fever were recently reported from Charleston, the State Department of Public Health immediately detailed an epidemiologist to investigate the situation. His study brought out two definite points of infection.

In one case the mother of a patient gave a history of typhoid fever. An examination showed that she is still an active *carrier* in spite of the fact that five years have elapsed since she was down with typhoid. The mother is doubtless the source of infection of her child.

Two other cases were traced to a sewer opening from a house where a typhoid fever patient was convalescing. The sewage emptied upon the surface of the earth at a point where neighborhood children gathered for play. Two boys who, while playing soldier, dug trenches near the sewer opening, promptly came down with typhoid fever at the expiration of the incubation period.

The source of infection for the other three cases appeared to be outside of town.

FULL-TIME MEDICAL HEALTH OFFICERS

The State Department of Public Health has prepared and will cause to be introduced into the legislature during the present session, a bill that provides for the employment of full-time medical health officers by every county in the State. A number of counties have already taken the initial steps on the proposition of a full-time health officer, according to reports. It is the belief of the State Department of Public Health

that the county is the logical and most practical unit around which local public health administration can be effectively established.

SURVEY OF HEALTH CENTERS

A recent state-wide survey of Health Centers shows that there are forty-two such institutions now operating in Illinois. The personnel employed in some instances include a part of the services of six physicians and specialists, as well as ten full-time public health nurses. According to available records, more than six thousand prenatal, preschool and infant cases have received attention through these Health Centers.

NURSING SERVICES ESTABLISHED

The State Department of Public Health, through its Division of Child Hygiene and Public Health Nursing, has recently assisted in the establishment or reorganization of school nursing services in Danville, Monticello, Belmont and Joliet. Just at present a large number of requests are coming to the Department for assistance and information in regard to instituting this type of service in rural districts where physicians are scarce.

Society Proceedings

Cook County

CHICAGO MEDICAL SOCIETY

Regular Meeting, March 9, 1920

1. General Consideration Concerning Prostatectomy and Prostatic Mortality.....Ed. M. White
Discussion.....R. Herbst and H. L. Kretschmer
2. Injuries of the Spinal Cord.....
.....Lewis J. Pollock and Loyal Davis
Discussion.....Peter Bassoe
3. The Management of Acute Cranial Injuries....
.....Harry E. Jackson
Discussion.....A. B. Kanavel and Ed. S. Blaine

Regular Meeting, March 16, 1921

1. The Use of Progressive Relaxation in Nervous Excitability and Exhaustion. (Illustrated)...
.....Edmund Jacobson
Discussion.....
Walter W. Hamburger and Arthur R. Edwards
2. Fundus Oculi Changes Accompanying Cardio-Vascular Lesions.....George F. Suker
Discussion.....Harry Gradle and Arthur R. Elliott
3. Aplastic Anaemia.....Ernest Lackner
Discussion.....
Prof. Schultz, Michael Reese Research Laboratory

Regular Meeting, March 23, 1921

1. Local Anaesthesia in Inguinal Herniotomy (Lantern Slides).....Leigh F. Watson
2. Physio-therapy—Vocational and Occupational...
.....Clarence Wheaton
3. Otitic Brain Abscess.....George W. Boot

Regular Meeting, March 30, 1921

1. Insanity a Quantitative Diagnosis....Ed. A. Foley
Discussion.....David B. Rotman
2. X-Ray Examination of the Head.....
.....Maximilian J. Hubeny

Discussion.....

- ...John A. Cavanaugh and Howard C. Ballenger
3. Observation and Statistics in Vaccination for the Prevention of Smallpox. (Lantern Slide Demonstration).....Wm. S. White

CHICAGO OPHTHALMOLOGICAL SOCIETY

Meeting of November 9, 1920—Continued

Examination of the limbus, its circulation, the transition from sclera to cornea, was quite a revelation. The view of the iris disclosed by this instrument was probably the most fascinating picture I have ever seen. The mosaic-like arrangement of the pigment, the fibers, the crypts, the contraction and dilatation of the pupil were well worth going a long way to see. The ability to see the microscopic details both normal and abnormal in the living was unquestionably an epoch-making step forward in ophthalmology. Unfortunately one was compelled to the conclusion that this instrument would not become very popular. It was very large, therefore could not be transported readily and it was expensive. He was inclined to think that it would be almost limited to large clinics or large institutions or to men who had plenty of space and time to do original work.

Dr. William A. Fisher stated that the instrument must appear complicated to others as it did to him, but it might appear very simple and practical when one knew how to use it.

Dr. George F. Suker concurred in what Drs. Fisher and Goldenburg said about this instrument. The essayist had opened up a large field. One in particular, when he spoke of the droplets in the anterior chamber producing a secondary glaucoma. These droplets undoubtedly were from a colloidal substance. If that was so, then Martin Fisher's (Cincinnati) theory was not so far afield, and acidosis could be an etiologic factor in glaucoma. Closer study of these particular droplets might determine whether they were composed of crystallizable or amorphous elements. Martin Fisher's salt solutions might, after all, be of greater value in these cases than was formerly believed.

Dr. Von der Heydt, in closing, stated that in the first place, with the slitlamp a definite continuous circulation of the aqueous within the anterior chamber might be demonstrated. The solids might be observed to rise near the warm iris, and were precipitated near the cornea. It had been determined that the lines of so-called clearing, in old corneal scars continued to widen and increase during life, contrary to the common impression that in time the process would come to a standstill.

Recently, he saw under slitlamp illumination an eye from which he had removed a senile cataract three years ago. It was beautiful to so distinctly see the clear membrane, holding back the vitreous, the supporting structure of the latter, and the very deep apparently optically empty space between the iris and this membrane. At one small opening the vitreous extended hernea-like forward toward the iris.

He would like to see one of the types of transient lens changes, such as were seen to exist for a short period after trauma, with the slitlamp. He had reference to that beautiful hexagonal, feather-like formation, apparently under the posterior capsule, seen after a blow, if there had not been too much hemorrhage to obscure the view. This change, as well as the very interesting macular changes after trauma, including wrinkling of the retina, were so often overlooked. The circular ring on the lens capsule, first described by Vossius, and thought to be a lens clouding, which also followed trauma, had been studied by the slitlamp. It had been ascertained that the ring was mainly composed of blood derivatives and iris pigment macerated on the anterior lens capsule. To see this ring it was necessary to dilate the pupil with medicine for at the time of impact the pupil dilated from the blow hence its position under the iris.

Two days ago he had a foreign body case, a spicule of iron went through the cornea, iris and lodged deeply within the lens. By the ordinary method of focal illumination with the ophthalmoscope, he was unable to see the steel, because of the dense lens clouding anterior to it. With the slitlamp

and microscope, and the intense illumination, he could easily see through the clouded lens substance. Consequently, before he removed it, he was able to exactly localize the steel, determine its size, save much valuable time and the expense of a roentgenogram.

(To be continued)

MADISON COUNTY

Our March Meeting

The Madison County Medical Society met at Collinsville, on March 4, 1921. Dr. E. F. Wahl, president, presiding.

Thirty-one members were present.

The secretary announced that Mr. Geo. W. Meyer, president of the Bank of Edwardsville, had kindly consented to furnish gasoline and oil for our roadster in the future as he had done in the past. Also that Mr. A. Bothman, of the Bothman Motor Co., had extended the privilege of the garage for the care of the car, for the ensuing year. A vote of thanks was unanimously passed voicing our appreciation of the courtesy of these men.

Miss Helca A. Heighway read her report for February, which was ordered filed.

The Committee on the Harrison Colony reported progress and asked for further time, which was granted.

Written charges against Dr. Ralph B. Scott, of Venice, were presented and on motion the secretary was instructed to proceed according to Constitution and By-Laws.

Dr. J. L. Wiggins, of East St. Louis, read a very instructive paper on "Fractures."

Dr. Willard Bartlett, of St. Louis, gave a very interesting lecture on "Local Anesthesia in the Surgery of Today." After discussion a vote of thanks was tendered to both of our distinguished speakers.

Adjourned to meet in Alton on the first Friday in April.

GREENE COUNTY

The physicians of the county affiliated with the Greene County Medical Society held a regular meeting at Carrollton on Friday, March 11th, and among the other good things enjoyed was the entertainment at Hotel Pierson as guests of the Carrollton doctors. L. Knox read a communication from Dr. Alex. R. Craig, Secretary American Medical Association, and a report on the case of Miriam Rubin. Dr. O. L. Edwards of Roodhouse read a paper on the "Removal of the Tonsils."

Dr. H. W. Smith of Roodhouse presented a paper on the "Wassermann Reaction."

The meeting was well attended and the discussion that followed brought out many interesting as well as instructive points.

Seventeen members were present.

Personals

Dr. W. H. Lange announces a new office at 5733 Lake street, Chicago.

Dr. Joseph Forrester, Chicago, fell down-

stairs, March 2, while attending a patient, and sustained a Colles' fracture.

Dr. Hubert Work of Pueblo, Colo., president-elect of the American Medical Association, has been appointed assistant postmaster general.

Dr. J. B. Hundley, Danville, was assaulted by E. S. Harrington whose wife is said to have fasted forty-seven days to convert him to her "religion."

Dr. Lee Alexander Stone has established a hearing board for physicians who fail to report cases of venereal diseases to the Chicago Department of Health. Dr. M. O. Heckard calls physicians and midwives before a similar board to explain when they fail to report births.

Joseph W. Becker of Jerseyville has been named as managing director of the Illinois Tuberculosis association to succeed Walter D. Thurber who resigned to accept a similar position with the Maine Public Health association. Mr. Becker has served as vice-president and secretary of the Illinois association.

News Notes

—Governor Small has proclaimed the week beginning April 17 as "Health Promotion Week."

—John Habul, an Austrian, is said to have been arrested in Chicago for defrauding his countrymen by claiming to be a physician.

—Knox County board will submit the question of approval of a tax levy for a tuberculosis sanitarium to another vote, though the vote in favor of making a start was favorable last November.

—The Illinois State Medical Society endorses the general plan of co-operation between the State University and the Department of Public Welfare whereby the University will be permitted to make use of the clinical facilities of the group of hospitals administered by the Department of Public Welfare.

The State Medical Society also endorses the declared intention of the University to co-operate with the Medical profession to supplement the work of the physicians but not in any way to enter into competition with them.

—The movement to segregate mental defectives with criminal tendencies so long advocated by Judge Olson of Chicago has at last become a

concrete proposition to establish a \$750,000 farm colony where these unfortunates may be placed for their own good as well as for protection to society.

—The Visiting Nurses association of Chicago has completed its thirty-fifth year. Total visits during the year were 216,615 to 32,845 patients. A six months' trial of home nursing was made which was said to be two-thirds self-supporting at \$1 per hour. They also saved the vision of many babies reported by the Illinois Society for the Prevention of Blindness.

—Dr. Lafayette B. Mendel, professor of physiologic chemistry, Yale University, and a member of the Council on Pharmacy and Chemistry, A. M. A., spoke before 500 members of the Chicago Section of the American Chemical Society on Friday, March 18. Preceding the talk, a dinner in honor of Dr. Mendel was served at the Quadrangle Club, University of Chicago.

—The association of Military Surgeons of Illinois was organized in Chicago, March 17, with the following officers for the ensuing year: Gustavus M. Blech, President; Wm. McIlwain Thompson, Vice-President; James J. McKinley, Treasurer, and Alfred de Roulet, Secretary. The Association restricts its membership to active and former medical officers of the Army, Navy, Public Health Service and National Guard. The first annual meeting will be held in Springfield, May 16. The program will be announced later. Reserve and discharged medical officers are urged to send their applications for membership to the Secretary at 7 West Madison Street, Chicago.

—The next meeting of the Chicago Society of Anaesthetists will be held Monday, April 11, 8 p. m. at the Hospital Library and Service Bureau, 22 E. Ontario St.

The proceedings will consist of a symposium on the anaesthesia program:

1. In Relation to the Hospital, Myrta Knowles, M. D.
2. In Relation to the Interne, Mary Lyons, M. D.
3. In Relation to the Surgeon, Ben Morgan, M. D.
4. In Relation to the Patient, T. E. Costain, M. D.

5. In Relation to the Medico-legal Aspect, J. E. H. Atkeisson, M. D.

6. General Discussion.

This society meets the second Monday evening of each month at the above address. All interested are cordially invited to attend.

ISABELLA C. HERB,
President.

FRANCES E. HAINES,
Secretary-Treasurer.

Marriages

LOUIS FAULKNER to Miss Mildred Frink, both of Chicago, January 29.

EDWARD FRANK SLAVIK to Miss Anna Mae Lustig, both of Chicago, February 23.

Deaths

WILLIAM SAPHUS BLOCK, Port Byron, Ill.; University of Vermont, Burlington, 1886; aged 70; also a druggist; died, February 12.

JAMES S. LEWIS, Grand Ridge, Ill.; Cleveland Medical College, 1878; aged 74; a veteran of the Civil War; died, February 10, from pneumonia.

JOHN ELMER ALLABEN, Rockford, Ill.; University of Michigan, Ann Arbor, 1883; aged 62; a Fellow A. M. A.; surgeon to St. Anthony's Hospital, Rockford; died, February 9, from chronic interstitial nephritis.

ADELBIERT ALLEN JOHN, Oregon, Ill.; Chicago Medical College, 1898; aged 64; died at Augustana Hospital, Chicago, March 2, from carcinoma of the stomach.

FREDERICK HAMILTON BLAYNEY, Capt., M. C., U. S. Army, Chicago; University of Illinois, Chicago, 1898; aged 51; a Fellow A. M. A.; major, M. C., Ill. N. G., prior to the World War; died in Washington, D. C., March 4.

GEORGE BOWERS SNYDER, Chicago; Jefferson Medical College, 1876; aged 67; surgeon to the Union Pacific Railway Company for twenty-five years, and a practitioner of Hays, Kan., for forty-two years; died, February 22, from chronic interstitial nephritis.

WILLARD WOODARD DICKER, Chicago and Oak Park, Ill.; Rush Medical College, 1908; aged 36; a Fellow A. M. A.; assistant professor of medicine in his alma mater; at one time president of the Aux Plaines Medical Society; died, March 1, from pneumonia.

CARL WAGNER, Chicago; University of Heidelberg, Germany, 1891; aged 57; a Fellow A. M. A.; surgeon to St. Joseph's Hospital and Municipal Tuberculosis Sanatorium; at one time president of the Medico-Legal Society, and North Side Branch of the Chicago Medical Society; died, March 11, from cerebral hemorrhage.

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Original Articles

SPECIAL POINTS IN THE SURGERY OF GALL-BLADDER AND DUCTS*

G. W. CRILE, M. D., F. A. C. S.

CLEVELAND, OHIO

1. *Relation of the Liver to Gall-Bladder Surgery.*

If one were to base his opinion concerning the function of the liver entirely on text-books on physiology, one might conclude that life could continue after the removal of the liver. It is well known, however, that an animal will live from two to eight hours only after the removal of the liver. It would appear, therefore, that the real function of the liver is still to be defined, and that in gall bladder surgery, and in surgery of the common duct we are to a certain extent dealing with the unknown. All surgeons are familiar with the so-called "liver shock" which sometimes supervenes after operation on the gall-bladder. The patient goes through the operation satisfactorily and recovers from the anesthesia. Blood pressure examinations and general physical examinations of the patient give no adverse indication. At the end of the first day, apparently all is well, but the night is not so satisfactory. On the following day the patient is restless, perhaps has nausea; he loses interest in his surroundings, refuses food, the tongue is dry and coated, a period of steadily increasing depression develops; in three, four, or five days the patient is dead. Autopsy does not reveal the cause of death.

In considering this peculiar danger in gall-bladder surgery, it became evident that researches should be directed to this particular problem; i. e., to determine what functions may be possessed by the liver in addition to those described in the text-book. To this end, in our laboratory we inaugurated a series of experiments. While our results thus far do not justify any final con-

clusions, yet we have made certain observations of interest which suggest at least that we may be on the right road to knowledge which will aid us in controlling the destiny of our patients.

Some years ago in association with Dr. J. B. Austin, who is a very able cytologist, many observations were made upon the changes present in exhaustion in the cells of the various organs and tissues of the body. We found changes in only the brain, the liver, and the adrenals; and that in these organs the changes appeared irrespective of the cause of exhaustion. We found also that the changes in brain and liver were so uniformly present as to make it appear that these organs played an interdependent role in activity and exhaustion. We then sought to determine the nature and extent of this interdependence, and to discover which, if either, was the more dependent upon the other. We found that after the liver was removed the brain cells disintegrated very rapidly—within an hour or less; that after the excision of the liver, the injection of adrenaline did not cause a phase of hyperchromatism of the brain cells as was the case in intact animals; and that the disintegration of the brain cells following excision of the liver could not be distinguished from disintegration of the brain-cells due to any other cause. On the other hand, the liver cells showed no disintegration in animals kept alive by artificial respiration after decapitation. These findings showed that some vital relationship exists between the brain and the liver so that the brain cannot survive without the liver. As far as our researches have disclosed, no other organ is so sensitive as the brain to the loss of the liver. This earlier research, however, offered no suggestion as to the explanation of this relationship between the brain and the liver.

It then occurred to me that perhaps the clue to this problem, as well as to certain other interrelationships within the organism, might be found in the application to the organism of the laws established by scientists in other fields. Lillie,

*Read before Annual Assembly of Tri-State Medical Society, Waterloo, Iowa, Oct. 4-7, 1920. District

Loeb, and other physical chemists have found that whenever cells have had brought to them the impetus to increased work, as for example in cell division, the permeability of their surrounding membrane is increased.

Osterhaut has offered experimental evidence that variations in the permeability of plant cells are equivalent to variations in their electric conductivity. Following these leads, we then based our researches upon the hypothesis advanced in *Man, an Adaptive Mechanism*, i. e., that men and animals are in effect electrochemical mechanisms, operating under the laws of physics. Accordingly we made experiments to determine whether or not the electric conductivity of the various organs and tissues of the body, those in the brain and the liver paralleling the cytologic changes observed in our earlier research. For example, we found that a single dose of adrenalin, sufficiently large to produce clinical evidences of increased brain activity, increased the electric conductivity of the brain, and that this increased conductivity corresponded to the hyperchromatism of the brain cells produced by an equal dose of adrenalin. So also, repeated doses of adrenalin, which clinically produce fatigue, cause decreased conductivity of the brain and chromatolysis of the brain cells. Of special significance, moreover, as regards our investigation of the interrelation of the brain and the liver was our finding that the conductivity changes in the liver were the antithesis of those in the brain; that is, after a single dose of adrenalin, the conductivity of the brain was *increased*, and the conductivity of the liver was *decreased*. After repeated doses of adrenalin, producing exhaustion, the conductivity of the brain was *decreased* and the conductivity of the liver was *increased*. A large series of observations of the conductivity of the brain and of the liver in conditions of stimulation and of exhaustion from many different causes established this antithetic relationship.

In these studies of electric conductivity as in our cytologic studies, it was necessary to kill the animal before the observations could be made, so that although the condition of the cells at the moment of death could be determined, the progress of the changes during life could not be determined. It occurred to me that since variations in function are almost invariably accompanied by variations in temperature, valuable

data might be secured by measuring the changes in temperature of the brain and liver and in other organs during life by means of the thermocouple. To this end special thermocouples were devised, so sensitive as to make possible the measurement of temperature variations within one one-thousandth of a degree. Here again our findings were in accord with those in the cytologic as well as conductivity researches. We verified the fact established by other observers—that each organ has its own range of temperature. As our special interest was in the brain and the liver, our observations thus far in this research, which is still in the initial stage, have been in the main confined to observations of the temperature changes in these organs under conditions which, with one important exception, were identical with those in the preceding researches—the exception being that in this research, our observations were made upon the *living animal*. We have found that every change in the condition of the animal, however produced, is accompanied by a change in the temperature of the brain. This change we may consider is the effect upon the brain of the temperature conditions in all the organs of the body combined, just as the temperature of a room is the resultant of the factors that add heat and the factors that subtract heat; e. g. the combination of the temperature of each and every person in the room with that of each and every object in the room. The resultant of these combined temperatures, however, is ultimately determined by the object with the highest temperature—the stove or the furnace in the winter time; the hot, sun-lighted air in the summer. In the normal animal organism, the liver appears to have the highest temperature. Therefore, when the temperature of the brain rises or falls under varying conditions, we may naturally consider first of all the influence of the liver. In support of this relationship, we found that after complete ligation of the liver, the temperature of the brain began to fall immediately and continued to fall until the death of the animal. This added final confirmatory evidence in support of the conclusion from our previous researches that, without the liver, the brain cannot function.

It then occurred to me that this essential dependence of the brain upon the liver might explain the so-called “liver-shock” after gall-bladder operations. We, therefore, studied the effect

upon the temperature of the brain and the liver of the various factors attending surgical operations. As one would expect, the effect of low blood pressure as the result of hemorrhage is a progressive lowering of the temperature of the liver and the brain. Ether anesthesia progressively lowers the temperature of the brain, the temperature curve corresponding closely to that following the ligation of the liver excepting during the initial stage—the period of excitement—when the temperature rises. It is certainly a very interesting fact (although we are not yet in a position to draw any inference from that fact) that the length of life after excision of the liver is almost identical with the length of time that an animal can live under ether anesthesia.

Is ether anesthesia the equivalent of the complete suspension of liver function? We found that surgical trauma, manipulation of viscera—any of the maneuvers which are incident to a surgical operation—produced changes in the brain temperature, tending to a progressive lowering in proportion to the extent, severity and protraction of the stimulus. Exposure of the viscera, alone, produced a progressive fall in the temperature of the brain, comparable to that following the excision of the liver. In view of these observations, it seemed as though it might be possible that the reason why a man or an animal can live for but a limited period of time under complete ether anesthesia may be that, among other effects of the anesthetic, the function of the liver is completely inhibited. The explanation of the way in which ether anesthesia is produced is in accord with this supposition. It is known that ether increases the resistance of the cell membranes—diminishes their permeability. That is, the power of the cells to be stimulated, to act, to promote vital processes is diminished. Interchange between the plasma and the gases is interfered with; the cells cannot receive oxygen; and asphyxia may result. In short, the cells may be asphyxiated. Our temperature, electric conductivity and cytologic observations as well as the clinical course of events indicate that when the liver is excised, the function of the brain-cells is largely suspended.

We next extended our observations to include certain protective measures. We found that under light nitrous-oxid-oxygen anesthesia—anal-

gesia, the temperature of the brain remained practically unchanged. Under deeper anesthesia with gas-oxygen, the temperature of the brain fell, but not as rapidly as under ether anesthesia. The introduction of hot water by the mouth, the application of hot packs, the elevation of the feet produced an immediate response in an increased temperature in the brain, thus throwing new light upon the therapeutic value of these agents. All this may seem a very far-fetched line of evidence in connection with surgery of the gall-bladder and ducts. What is the practical application?

First of all, these studies appear to indicate that in "liver-shock" the internal respiration of the liver cells has been interfered with to an extent which as effectively prevents its functioning as if the liver had been ligated. Why is "liver-shock" peculiar to gall-bladder operations? In the patient with deep jaundice, who has suffered a period of nausea with consequent loss of nutrition and of water equilibrium the internal respiration of the cells—of the liver in particular—has become impaired and in addition the function of the liver is quite certainly interfered with by the back-pressure of the bile. If, owing to infection, to diminished nutrition, to want of water, to lowered blood pressure, to the back-pressure of bile, the internal respiration of the liver has been reduced ten, twenty, forty, sixty, or eighty per cent. at the time of operation, to that extent will the brain have been compromised and by so much will the power of the liver to function in the presence of the deleterious factors of the operation have been reduced. If the internal respiration of the liver cells has been reduced by forty per cent. and the patient is placed under full ether anesthesia, which of itself alone will reduce the internal respiration in a like degree, then the remaining twenty per cent. of functioning power can hardly suffice to carry the patient through. Moreover, in addition to the anesthetic, the trauma of the operation, the cooling of the viscera and perhaps hemorrhage will add their quota so that a one hundred per cent. loss of liver function is all too readily reached.

It follows then that surgical measures, as indicated by the findings in our conductivity and temperature studies, should be directed primarily to the restoration of the already impaired in-

ternal respiration of the liver cells and to the prevention of further damage.

As our experiments have shown an unaltered brain temperature under nitrous-oxid-oxygen analgesia as opposed to a continuous fall to the death point under full surgical anesthesia, analgesia only is employed if possible, and if deeper anesthesia is required at any stage in the operation, it is secured by the same anesthetic since, as we have stated above, the fall in the brain temperature under full nitrous-oxid-oxygen anesthesia is very slow and gradual as compared with the rapid fall under ether anesthesia.

Infiltration of the surgical area with a local anesthetic is employed to protect the brain from the immediate alterations caused by trauma; and the amount of trauma is diminished by making the incision sufficiently large to provide a clear view of the entire field of operation. Warm pads are used to prevent cooling of the viscera. The liver itself is handled as little as possible. When the wound is closed, care is taken not to tie the stitches too tightly, thus obviating needless pain. The wound should receive the lasting protection of blocking by means of quinine and urea hydrochlorid. Heat is immediately applied to the entire abdomen, following the indication in our experiments in which the application of hot pads or the introduction of hot water into the stomach produced an immediate increase in the temperature of both the liver and the brain. It is of interest to note that in several instances the increase in the temperature of the brain occurred first.

A sufficient blood supply is an absolute essential to the maintenance of the internal respiration of the cells. Therefore, if the blood pressure is low, if the patient has secondary anemia, as a result of his long illness, a transfusion of blood should be given at the time of operation, followed if necessary by another transfusion on the following day, and by still added transfusions as indicated later.

The internal respiration of the cells cannot be maintained without water, and especially large amounts are needed by these patients because of the abnormally large amounts of waste by-products to be eliminated. Water is, therefore, urged by the mouth, by rectum, and when necessary, by hypodermoclysis—by any and every

route that will ensure the reception of a sufficient amount to restore and maintain the normal water equilibrium—usually from 3,000 to 4,000 c.c. daily.

These factors in the surgery of the gall-bladder and the ducts are not new; but the manner of their application differs from what we have done before in one prime particular; heretofore we waited until the indication arose before making use of many of the protective measures we have noted above. Now, with the clearer understanding gained from our later studies, we anticipate the need of the patient. We know, by the application of physical measurements which give as accurate results as those secured by the use of the yard-stick and the pound, just what the factors of the operation will do to the patient; we know to some extent at least the condition of the patient's resources. We, therefore, carry our attack into the camp of the enemy rather than wait to be attacked. Other experiments and other observations, especially our experience in the war, have shown that, whenever a patient is reduced to the point where a crisis is expected, if the crisis is waited for before action is taken, the patient may be lost, in all probability will be lost. Whereas, if instead of limiting ourselves to a counter-offensive we make a surprise attack, the crisis does not supervene for the enemy flees without attacking. In brief, it is better to supply even a patient who may not require it with every available means of protection than to take a chance that a patient who may require it may lose out for the lack of any one factor which may protect him. Protection and treatment are based on the indication of the table of probabilities, not on the indication of the individual patient. We should not lose the patient while deciding upon the indications to prevent his loss.

As for the practical value of the application of the principle which laboratory research and clinical experience appear to have established—the essential relationship of the brain and the liver and the consequent vital need of protecting and augmenting the internal respiration of the cells of the liver—we can only say that while we are not satisfied as yet with our results, while we realize that thus far the studies we have quoted are suggestive rather than conclusive, nevertheless whatever fundamental law underlies

the action of the measures we have indicated, by their application we have diminished the mortality rate of operation on the gall-bladder and ducts from 6.2 per cent. to 1.6 per cent.

2. *Diagnosis.* Everyone agrees that it is not always possible to diagnose a lesion of the gall-bladder. In exploratory operations gall-stones are sometimes found unexpectedly; and again, having opened the abdomen for the purpose of removing gall-stones we find that the symptoms are due to some other cause. This does not happen frequently, but a few such mistakes amount to many in their impression upon the operator and the patient. As one measure whereby to add certainty to the diagnosis we have been using Meltzer's magnesium sulphate test as reported by B. B. V. Lyon, M. D. in the *Jour. A. M. A.*, Sept. 15, 1919. In the application of this method we have found that certain characteristics of the gastric and duodenal contents are fairly constantly present in gall-bladder disease.

1. In many cases of cholelithiasis the gastric fluid in most cases is bile stained. When the fluid is clear, it does not mean, however, that gall-bladder disease does not exist, and more than half of the cases of cholelithiasis have a mild or moderate hyperacidity. The duodenal contents normally are clear and faintly bile tinged. A cloudy fluid from the duodenum means nothing if it is intermittently cloudy or acid, or if upon microscopical examination it is found to contain stomach elements. In other words, one must be sure that the collected fluid is true duodenal content and not fluid from the stomach which has just spurted through the pylorus. When the duodenal fluid is constantly cloudy and alkaline, and contains no pus cells, then inflammation of the duodenum or biliary tract is to be suspected.

2. Of the first bile which is collected after injection of the sulphate solution, i. e., "common-duct bile," little can be said. Since starting this series we have had two cases of total obstruction of the ductus choledochus. In these we found only duodenal and stomach contents. In one case when the duodenal contents were cloudy and contained pus the bile which followed injection of the magnesium sulphate was clear and contained only a few cells. We believed in this case that we were dealing with a catarrhal jaundice with no involvement of the biliary tract,

and the clinical picture strengthened this belief.

3. When the "gall-bladder phase" is absent, we have concluded that the cystic duct is obstructed by adhesions, by stone, or that the gall-bladder is hampered by adhesions. In cholelithiasis when the cystic duct is patent, the bile from the gall-bladder is often more viscid and occasionally is cloudy and contains pus cells. A cloudiness due to precipitated bile salts often occurs in normal bile when it has stood for some time. The color of the bile from the gall-bladder varies from almost black to a light brown, but is usually darker than the bile from the common or hepatic ducts. We have noted nothing peculiar in the color of bile from pathological gall-bladders. Usually the bile from a normal gall-bladder is prompt in making its appearance, coming in from two to six minutes after the injection of the magnesium sulphate solution. A greatly retarded appearance of the "gall-bladder phase" occurred in two cases in which gall stones were found at the operation. Occasionally, too, we find an unusually small amount (10 to 30 c.c.) of gall-bladder bile in cholelithiasis.

4. Thus far the hepatic bile has served us only as a means of contrast with that from the gall-bladder.

In eight cases we have made the diagnosis of obstruction of the cystic duct previous to operation by the magnesium sulphate test. These eight cases all showed an obstruction of the cystic duct at the time of operation. In one case in which it was not necessary to remove the gall-bladder, we had the test repeated and secured a "three-phase test" following the operation, while before the operation we had been able to obtain only a "two-phase test," the "gall-bladder phase" being absent.

From our experience to date, therefore, we feel that this test is well worth while, and that it does give us additional evidence of the pathology of the gall-bladder.

If the gall-bladder is full of stones, no gall-bladder bile will appear, although other indications also may prevent the delivery of bile from the gall-bladder. If the ducts are free and there is an infection in the gall-bladder, evidence of the infection will appear in the gall-bladder bile. Thus this test provides a valuable clue to the presence of chronic cholecystitis.

Of the 93 cases in which this test has been

applied, we have operated on 33, and 30 have verified the findings. In one case in which we drained a gall-bladder which had contained a number of stones, repeated tests made after the fistula had healed showed the presence of gall-bladder bile which had been absent before the operation.

While this is a new test, and in many cases may not provide final evidence, nevertheless we are satisfied that it adds a valuable source of information in the diagnosis of gall-stones.

3. *Cholecystectomy vs. cholecystostomy.* The case referred to above in which the gall-bladder was drained rather than removed suggests a brief discussion of the question as to whether the gall-bladder should be removed or drained.

A study from case histories and our experience that too often gall-bladders which had been drained gave later trouble which necessitated their removal has made us adopt the following general rules:—

The gall bladder is removed in the following conditions:—

- a. If there has been an acute cholecystitis.
- b. If there is a stone in the cystic duct at the time of operation.
- c. If the cystic duct is hard and thickened from the former presence of a stone.
- d. If the gall bladder wall is thickened.

The gall-bladder is not removed if the patient has never had acute cholecystitis and the gall-bladder presents a normal appearance.

The question may be raised: why leave the gall-bladder in any case, since good health is possible without it? Experience has shown that after the removal of the gall-bladder, or if it has failed to function for a considerable time because filled with stones, the common duct will often become dilated. Judd of the Mayo Clinic has shown that the common duct to some extent compensates for the gall-bladder by storing bile.

Just as soon as the common duct begins to store bile it is subject to the same tendency to the formation of stones as existed in the gall-bladder. It would seem far better to take a remote chance of future recurrence of trouble in the gall-bladder than a considerable chance of the occurrence of common duct stones. Everyone knows how difficult is a repeated operation upon the common duct after the removal of the gall-bladder, especially if there are many ad-

hesions. In addition to the possibility of the occurrence of stones in the common duct, there is the probability of injury to the common duct in the process of removing the gall-bladder. It is common experience that with the increased number of cholecystectomies, more patients are presenting themselves for operation on account of the divided common duct.

Cholecystectomy is the operation of choice under the conditions cited above, but it is an operation which is fraught with difficulty and carries with it a certain degree of hazard.

By the practical application of our conception of the relation of the liver to gall-bladder surgery as explained in our first section, and by use of the points in operative technique noted above, we have reduced our mortality rate from 6.2 per cent. to 1.6 per cent.

SOME MEDICAL ECONOMICS PROBLEMS*

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CHICAGO

Mr. President, Ladies and Gentlemen: First of all I want to thank your officers for the opportunity to be with you again this evening. The last time it was my privilege to address you we discussed Compulsory Health Insurance. Tonight I think it will be better to take a general view of the medical economic situation as it presents itself.

A practical farmer does not buy a horse just because it happens to have a high sounding name. About the first thing he does is to look at the eyes to see whether the beast is blind or not and to determine whether it is true or not. The next thing he does is to run his hands over the joints to find out whether it has a spavin or ringbone, splint or stifle; then he tests its wind to determine whether or not it has heaves and finally he looks at its teeth to see whether it is as old as Methuselah or of a later vintage. The story is told of a city man who became an agriculturist. About the first thing he did was to buy a horse. He was shown a gentleman horse by the horse dealer. It was not worth much but he bought it and paid about twice as much as it was worth, principally because the horse jockey kept

*Address delivered before the Northwest Branch of the Chicago Medical Society, on March 11, 1921.

calling the beast by the not altogether appropriate but very euphonious name of Lady Clementine. This is about the way we of the medical profession have in the recent past been asked to buy welfare schemes of all kinds. If such a scheme has had either the word Charity, Philanthropy, Health or Welfare interwoven into its title, we, of the rank and file of the medical profession, have been asked by some of our high-brow near-medical leaders to buy without further examination. It is about time that the medical profession of America use as much judgment and discretion when it goes into new schemes as does the ordinary plain farmer when he buys a horse.

This is the age of standardization. We have standardized medical colleges, standardized surgeons; we are soon to have standardized hospitals and we are credibly informed that the lay Health Commissioner of Detroit is trying to standardize the stomachs of its citizens. It occurred to me recently that it might be a good idea if we could standardize all these schemes that are being presented to us. Give them the acid test and if they are not true gold, let us not buy them even if they are called Lady Clementine.

I think the medical profession ought to oppose all schemes

1. *Which are not absolutely necessary.*
2. *Which introduce new evils.*
3. *Which advertise a few at the expense of the many.*
4. *Which appropriate without fair remuneration the skill, knowledge and time of the physician.*
5. *Which are palliative instead of preventative or curative.*
6. *Which further place medical men under lay supervision.*
7. *Which unduly interfere with the individualism of the medical man or are paternalistic.*
8. *Which have a tendency to pauperize the public and thus destroy the self-respect and self-reliance of the people.*

Let us revert and briefly consider each one of the above eight tests:

1. I believe that the medical profession of America renders better service to its fellow men than does any other group of citizens. I believe that the average American citizen has better medical care than the average citizen of any

other country on the globe. If these two statements are true, what is the need of any of these new fangled schemes? Of course, we must have progress, but—

2. Let us be very careful in adopting new schemes to see that they do not introduce new evils—evils which may be greater than those we are trying to correct. I heard an English publicist and lecturer speak in Chicago some eight or ten years ago and he described a little scene that he had witnessed the day before on Wabash Avenue as rather typical of American life and thought. He said he was riding on the front platform of a street car. It was a slushy, blustery, snowy, muddy day and the conductor stopped at a crossing at the side of a mud puddle and rather querulously ordered the passenger to “step lively, please, step lively.” The Englishman said he felt like saying, “Don’t look where you are stepping but keep a-moving.” It is about time that we physicians look where we are stepping. Make sure first that we are going in the right direction before we adopt any scheme. Then if it proves good, adopt it, but let us not keep a-moving just for the sake of moving.

3. Let us analyze the real fundamental reasons for the establishing of free clinics and dispensaries in Chicago as elsewhere. You will find four reasons—two are legitimate and two are not. The legitimate ones are to provide proper medical care for the sick poor, and to provide teaching material for medical students. The illegitimate ones are for the purpose of advertising a certain doctor or group of doctors, or to act as a feeder for a certain hospital. When we adopt new schemes let us be careful that they are for the benefit of the rank and file of the profession and the people and not for the aggrandizement of a few. A very large per cent of the dispensaries of Chicago should be abolished. They are detrimental to the profession and to the citizenship of Chicago. This is not popular doctrine but it is true just the same.

4. We should also oppose every scheme which appropriates the time, skill and knowledge of physicians without just, fair and reasonable remuneration. Why? Because anything which continuously works to the disadvantage of the medical profession will in the end work to the harm of all the people of this country. Next to stability of government, honesty of administra-

tion and general intelligence of the people, the welfare of a nation depends more upon the quality of medical service which is rendered to its citizens than upon any one other thing. The longevity, health, efficiency and happiness of a people depend more upon the integrity, ability and industry of its medical profession than upon anything else. If these two postulates are true, and I think they are, then anything which hinders medical progress and which will have a tendency to prevent suitable young men from entering the profession is inimical to the best interests of the whole nation.

5. We should oppose every scheme which is a palliative instead of a preventative or curative. It is an axiom in medicine and surgery and should be in political economy that a palliative must not be used continuously for any considerable period of time unless the case is hopeless. These people who want to reform every one except themselves are continually advocating the continuous use of palliatives and this is a serious economic mistake. We physicians have learned better. We use morphin only to bridge over a period of short stress or to alleviate a hopeless condition.

6. We should oppose any scheme which has a tendency to further place medical men under lay political supervision and control. Medical men are being more and more dominated by laymen. This is a bad thing for the medical profession and a very serious obstacle to medical progress. Our hospitals are being more and more dominated by lay boards; our medical colleges are virtually completely under the control of laymen. Quite a number of our medical schools have deans who are not medical men, who cannot practice medicine in the state in which they are deans because they are not medical graduates. Another group of our medical deans while they are graduates from medical schools are unfit to practice medicine because they have had no practical experience in the practice of medicine. A very large group of our medical teachers are not medical men and while the old system of ownership of medical colleges by physicians had many objections, the new system has many objections which are even more serious. Our national, state and county institutions with their thousands of patients are controlled by lay boards. In Europe where Compulsory Health

Insurance has been in force, this control is so menacing that medical progress has practically ceased. Frederick L. Hoffman is reported as having found a very amusing incident in his recent investigation of the workings of the Compulsory Health Insurance act in England. An English panel doctor prescribed fifteen capsules for a patient but the patient got well when he had taken nine. This physician was called before the lay board, censured and fined because the lay board claimed that he should have known that the patient needed only nine capsules for his recovery. How would you gentlemen like some lay board appointed by Hinky Dink, Bathhouse John, or John the Pow, or some other group of equally powerful politicians in this city, any one of whom has more political influence than all of you combined, to tell you just what you may and may not do in the practice of medicine?

7. It is time, gentlemen, that the medical profession wake up. I am not a pessimist but the medical profession is today facing the most serious crisis that it has ever faced in the history of American medicine and it is facing it partly because of the general unrest among the people and partly because of muddle headed leadership. Most of these schemes interfere with the individualism of the medical man. There can be no medical progress without individualism and without individual liberty. In political economy I believe in *voluntary cooperative individualism*, in other words *democracy* as opposed to *socialism and autocracy*. I am opposed to each and every one of the fifty-seven varieties of socialism because it interferes too much with individualism and dampens personal enthusiasm and incentive. I am opposed to autocracy for much the same reason.

8. We should oppose any scheme which has a tendency to pauperize the public or which robs the people of their self-respect and self-reliance. Practically every eleemosynary institution is evidence of some fault in our economic system. It may be necessary now but our supreme effort should be to make all such institutions superfluous. We must have certain charitable institutions today but outside of charitable institutions for mental, moral, and physical defectives who are unable to provide for themselves, the time should come and must come and will come, if we progress in civilization, when there will be

no other charitable institutions because charitable institutions, no matter how carefully managed, have a tendency to take from independence its proper pride and from mendicancy its salutary shame. Shakespeare said very well, as he always said very well:

"Who steals my purse steals trash; 'tis something, nothing;
'Twas mine, 'tis his, and has been slave to thousands;
But he that filches from me my good name
Robs me of that which not enriches him
And makes me poor indeed."

If Shakespeare had lived in this present day with all the innumerable welfare schemes in operation and contemplation he would have added in very much better English than I can command the following thought: "And he who deliberately robs any man of his self-respect and self-reliance is infinitely worse than even the thief or the blackguard. He is an enemy to society and a menace to free institutions." Free institutions depend upon self-respecting citizenship and many of these welfare schemes rob men and women of their self-respect and self-reliance. In this connection let me read just one illustration from many which could be cited.

Several months ago the wife of a public school teacher, suffering from a lacerated perineum with a very pronounced rectocele, came to me with the following history:

Has had six children, youngest about six months old. When seven months pregnant with the last pregnancy, she decided to go to one of our largest quasi-public hospitals to be confined, because this hospital was under the management of a religious organization of which she had been a member since childhood. She was examined by one of the hospital staff, told that she had a severe rectocele and an immediate operation was advised. She consulted her brother-in-law, a physician, who advised against the operation at this time and told her to wait six months after the delivery and then see me about repair work. In spite of the most persistent urging of the hospital physician, she refused operation, was delivered six months ago and a few days before I saw her, the follow-up nurse from the above hospital called on her and told her that she ought now to have her repair

work done and that a certain prominent gynecologist had agreed to do it for her free of charge; instead, she came to me for examination and advice.

I operated on her a few days later. On examining her today, two months after the operation, I find the result perfect and the patient profuse in her expressions of gratitude for having been so completely relieved of the constipation and rectal trouble and in today's mail I received a letter from her husband, from which I quote the following: "Your statement was received a few days ago. Please accept my thanks for its amount, associated as it is with the highest grade of service. Thanking you with all my heart for what you have done for her and my family, I am, very gratefully yours."

I am not reading this letter to throw a bouquet at myself. I am simply reading it in order to be able to ask you whether you do not think that this patient was better off because she came to me and because she paid for her operation than if she had gone to this hospital, had a doctor who to my personal knowledge spent eight years in acquiring his medical education between the time that he left high school and the time he earned his first dollar from the practice of medicine, operate on her free of charge. What moral right had this hospital to donate that doctor's skill, knowledge and time and give it to the wife of a teacher in our public schools? If our public schools do not pay enough to provide medical care for the wife and children of its male teachers so that they may preserve their self-respect, it is time that we raise the salary of the public school teachers. What the men and women who are doing the work of this country want is not charity but justice. They want the privilege of having for themselves and their families the doctor of their own personal choice. They do not want to be pauperized, and practices such as above cited are nothing short of indefensible.

The activities of medical men, as medical men, can be classified into three functions: First, sanitation and public hygiene; second, the teaching of personal hygiene, and finally, the treating of disease. The first is distinctly the function of the state and the last is distinctly the function of the private practitioners of medicine. If anyone has found anywhere in the writings of

any of the gentlemen who are trying to make us swallow Health Insurance, Health Centers, and whatnot, the above fundamental classification and distinction, I would like to have a copy of it and I will thank you for it. They do not seem to be able to clearly comprehend that the state is the only agent that can really look after sanitation and public hygiene and that private physicians are the only ones who in the long run efficiently and effectively treat the sick. Why is it that in 145 years of existence of this republic nothing has ever come out of a government controlled institution that has materially improved the treatment of the sick? Here again if you can find a single exception I would like to have it. During the time of the existence of our republic approximately one per cent of the citizens of this country have been under the medical care of the nation, state, county or city authorities and yet not one single thing in the improvement of the treating of disease has come out of these activities of the government. Today there are approximately 1,000,000 people under absolute medical control of the above governmental agencies. What are they doing to improve the treating of disease? Absolutely nothing. Why? Your last speaker has told you in explaining his x-rays on empyema when he said, "Well, we did not stay on the job long enough to see how the cases turned out." Just about the time a medical man gets warm in his seat in a medical job and gets really interested in a certain line of work, he has to move on. Some lay bureaucrat down in Washington or Springfield pulls the string and the doctor has to move and the result is that after a few such experiences the doctor loses his interest and enthusiasm in treating the sick and he becomes interested in the only things that are permanent in government medical service—fawning for favor and political advancement, paper work, statistics, and public hygiene and sanitation. This is very well so far as it goes, but it does not cure the sick or make for greater efficiency in the treatment of disease. If you or I had the results in the treatment of empyema that occurred in some of our training camps we would have to go out of business. I have practiced surgery for twenty-seven years. I have lost some empyema cases, but I have never had an acute empyema case which I operated on primarily that

did not heal promptly without a secondary operation. Not one. And your essayist has shown you x-ray after x-ray picture of cases that had not healed months after the primary operation and he doubted whether they ever would heal.

The teaching of personal hygiene is a function that may be equally divided by the state and private practitioner but the treating of the sick is distinctly the function of the private practitioner of medicine. He who thinks that the successful practice of medicine and surgery depends entirely upon the ability to make a correct diagnosis, knowledge of the action of drugs, and a certain skill in the handling of surgical instruments, is as far wrong as he who thinks that all that is worth while in life is money and what money will buy. While money is needed in our modern economic system to procure the necessities of life, the finest things in life such as true friendship, true love, and self-respect, cannot be purchased with it. So with the practice of medicine and surgery. To make it really worth while, the above requirements must be supplemented by an untiring devotion to detail and duty, a degree of personal sacrifice unknown in any other vocation in life. These coupled with the other things alone can secure that respect and confidence on the part of the patient so essential to recovery from a critical illness. How many times has the real true physician not been told by his patient after a desperate illness, "Doctor, the only thing that kept me alive was that I just knew you would not let me die," and do not make the mistake of thinking that this is necessarily the twaddle of a weakling. Every really great physician has been told this time and again by some of the finest and strongest of his patients, who in time of severe illness and temporary physical weakness, needed some one stronger than themselves to lean on. This is one of the chief reasons why the attempt to treat the sick by impersonal, wholesale, commercial methods, always has been and always will be a failure, relatively speaking.

In Vol. VII, No. 1, Page 54, March, 1917, of *The American Labor Legislation Review*¹ I find the following:

I am unequivocally in favor of compulsory insurance and the protection of maternity. That, I think, must be the attitude of any one who studies the question of illness in its relation to economic conditions.

1. Dr. Frank Billings.

I am in favor of them, too, because our present method of managing the sick poor is about as bad as it can be. While we endeavor in every way to alleviate their sufferings and to put them back at work, our methods are loose. There is no unit of efficiency. The great number of hospitals and dispensaries which exist are said not to be enough, because they cannot take care of all the sick poor; and yet, from the standpoint of what would be necessary if we controlled the sources of disease, they are too many.

To my mind health insurance is going to be one of the best measures of preventive medicine. Under its stimulus the time will come when every community, to economize its taxes under this law, will see that there are practically no patients suffering from typhoid fever within its limits. We will have no smallpox; diphtheria will be diminished; everything known to be communicable will be diminished and many of the diseases incident to some confined, chronic affection will be removed. Such results will not be achieved except by some measure of state supervision, and I know of no state supervision which will equal state compulsory insurance.

I would like to have Dr. Lambert describe a little better the provisions for an inquisitorial body over all the health insurance work. You know, and I know, that we do not do our work well unless there is some incentive, something to make us do it properly, and so I think that in this bill there must be something of that kind.

Gentlemen and ladies: If the gentleman who wrote the above needs an inquisitorial body to stand over him in order that he will render the best possible service of which he is capable, I am just plain sorry for him. In the last thirty years I have learned to know hundreds of American physicians and my experience is that the great majority of them have a well-developed, active, perfectly normally functioning conscience, a much better monitor I believe than a lay political straw-boss would be. In addition I would like to know by what process of reasoning or stretch of imagination the gentleman arrived at the conclusion that any system of Compulsory Health Insurance now in operation or in contemplation would be "one of the best measures of preventive medicine." To the contrary about the best and only thing that can be said in favor of Compulsory Health Insurance is that it might temporarily be an economic palliative. That was probably the theory on which Lloyd George acted when he had the Compulsory Health Insurance law passed in England. The opiate is already beginning to wear off and the unrest in England is undoubtedly greater than it would have been had this palliative never been employed.

On December 2, 1920, the gentleman who wrote the above quotation from *The American Labor Legislation Review* delivered an address before the North Side Branch of the Chicago Medical Society as reported on Page 352 of the February 5, 1921, issue of *The Journal of the American Medical Association*,² Vol. 76, No. VI.

Compulsory health insurance, I believe, would be unsatisfactory to the people it is intended to benefit. In the main, it is class legislation, which usually brings injustice to some other class than those it is intended to help. Under compulsory health insurance the chief sacrifice made in service and money would apparently fall upon the medical profession. It is intended to benefit the working class, many of whom earn as much or more in wages than the average annual income of the private practitioner. In my opinion, its alleged advantages to the laboring class do not solve the problem of better and more efficient medical service for the people whom it is intended to benefit. Its application will be more likely to degrade the members of the medical profession who become its servants. This derogatory influence on a part of the profession is most likely to be reflected on other physicians in the community with the resulting deterioration of medical service to the whole population. There is an axiom which is related to all schemes intended to benefit the public health. It is this: The chief dependence for the conduct of the necessary ways and means to improve health and lengthen life must be placed on the medical profession. I think it may be said that the majority of the medical profession is opposed to the statutory enactment of compulsory health insurance.

After four years of enlightening missionary work by my friend Dr. Ballinger and others, note the change of front. But then he goes on in the next three pages and describes the new panacea for all medical ills—Health Centers. I wonder, gentlemen, whether we have not a right to conclude that this gentleman is no longer a safe adviser for the American medical profession on matters of medical economics? I leave it to you to judge. Health centers, according to my humble opinion, is the same old baby with a new name and a couple of its feet cut off, and one of the feet is not quite severed either. He says that health centers are not compulsory. No, not until you adopt them. Compulsory Health Insurance is not compulsory, either, until you adopt it. The only difference between the health center and Compulsory Health Insurance in this regard is that you make the health center a matter of home rule and local conditions, but when you once adopt the health center it is practically

2. Dr. Frank Billings.

just as much compulsory as Compulsory Health Insurance. Another feature that is actually cut off is that there is no provision for paying indemnity to people who are sick or out of work. But what assurance has the medical profession that if it should adopt this baby with a new name, rear it with loving care and kindness, that it might not turn out to be a baby newt or a baby salamander and that within five or ten years those feet might not grow out again? Can't tell. Let it in once and you will get the same old baby back that you have been fighting for six years and that this gentleman has himself disowned.

When I was on the farm, with Dr. Hemmie here, as our next door neighbor, we had to occasionally deal with skunks and rattlesnakes. The skunks would come to steal our chickens and the rattlesnakes had a disagreeable habit of lying under the bundles that we had to bind and shock. I learned one thing in those days from the experience of others, and I have no doubt but that Dr. Hemmie learned it also, and that was never to temporize with, to fool or play with, a rattlesnake or a skunk. One of our neighbor boys tried it. He took off his clothes and went after a skunk with a club. What that skunk did to him was as the boys say "good and plenty." There is just one safe way to deal with a skunk or a rattlesnake, and that is a good, dependable, reliable double-barrelled shotgun. I would no more temporize or compromise with any of the schemes so far proposed than I would temporize or fool with a rattlesnake, a skunk or a hyena. I would hit, shoot or kill them, while they are still in embryo and while the hitting, shooting and killing are good.

I met one of my colleagues in the hospital the other day and he said to me, "Why do you not get in the band-wagon? Why do you not adopt this makeshift scheme proposed at the North Side Branch? I know it is only a makeshift, but you had better adopt it, rather than ultimately submit to Compulsory Health Insurance. *You know we sometimes have to compromise with the devil.*" My answer was, "No, doctor. *The minute you compromise with the devil you are lost.* We are in the right and I am a firm believer in the ultimate victory of the right." There is only one real antidote for all of these uplift schemes, ladies and gentlemen, and that is better and better and ever better work on the part of private

physicians, be they either general practitioners or specialists. That is the only antidote that is worth considering. The others are all makeshifts, they are all compromises, and the minute right compromises with wrong it is whipped.

Talking about skunks reminds me of a story. About forty years ago a farmer friend of mine hired a newcomer who had been in this country only a short time. One evening as the farmer was sitting in his kitchen this hired man came in greatly excited and said, "Say, Mr. Weeler, right behind the *stall* (barn) I ketched a nice liddle animal. He was black all over and white all over, but he stinked so that you cannot smell him." My friend completed the story by saying, "But that hired man stunk so you could smell him for three months, particularly on a rainy, murky day." If the medical profession adopts any of these schemes they will have the stench in their nostrils for many and many a day because it is a lot easier to catch these things than get rid of them.

Have you heard the story about the loving couple on the beach? A very modern young woman and a very bashful young man. After much cajoling and urging the young man proposed and after she had waited what appeared to her the right length of time and nothing happened she said, "John, dear, aren't you going to kiss me?" He said, "Mary, dear, I can't. I have my mouth full of sand." And she retorted somewhat petulantly, "Swallow it, you boob, you need it." That, gentlemen, is just what the medical profession needs today—sand.

You know there is a place on the border of France called Verdun. Do you know what the slogan of those men was that suffered the tortures of hell during four long years of war? It was "They Shall Not Pass." There were some faint hearts back in Paris who said, "Let them come through; we can't hold them anyway." But there was a general and his staff and just plain ordinary men at Verdun who stuck to the slogan, "They Shall Not Pass," and they did not pass. If those Frenchmen had listened to the high-brows in Paris, France would be a vassal of Germany today and the French would be slaves. If we of the American medical profession are faint hearts and cowards in spirit, we will soon be slaves in fact. If, to the contrary, we are

courageous and undaunted, we are going to remain free men.

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SUBSEQUENT TREATMENT IN CASUALTY CASES

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When we entered upon the world war, the attention of the medical profession and particularly of those interested in surgery, centered upon the tremendous developments in casualty work which would doubtless come about in our experience overseas. Perhaps on account of its more spectacular aspects, the earlier consideration of war surgery was confined largely to first aid and, as a result, medical literature rapidly became almost overloaded with articles on this phase of the subject. The first monographs and the first volumes on wartime casualty practice, as had been the case with the literature of emergency surgery of several years previous, devoted little attention to the very essential follow-up of cases. Possibly in our pre-war literature this omission may be accounted for by the prejudice which has prevailed in the medical profession against massage, electricity and hydrotherapy—valuable agencies which have fallen into some disrepute through their employment by drugless healers and other quasi-medical practitioners.

As we have emerged from the war, however, we find that the after-treatment of emergency or casualty cases has developed a new dignity and a new importance, and, at the same time, if one were asked to designate the most significant developments from wartime surgical experience, he would probably point out the physical reconstruction of the maimed and the wounded, in which the after-treatment occupies a most conspicuous part.

On account of the very meager literature on the subject, I shall not attempt to draw conclusions from the experience of others; but will confine myself to the informal discussion of my own observations based on a rather extensive list of cases seen during the past few months. I will say in this connection, however, that prac-

tically all surgeons with whom I have talked and such men as Clarke, Hutchins, Kossler and McFee who are giving thought to the possibilities of reconstructive therapy, speak with the utmost enthusiasm about it and further, that there is ample evidence that the apathy which has existed in regard to the unquestioned efficacy of massage in the past is rapidly disappearing.

First, I want to disclaim at once that I am a physiotherapist. I know little of the technique employed by masseurs, electrotherapists or hydrotherapists. My conclusions are based upon the end results attained by a physical therapeutic expert constantly employed in my office with patients which have passed through my hands and with whose conditions I have been perfectly familiar. These results have been such as to lead me to feel that in relegating physical means of treatment to quacks, charlatans and drugless healers we have overlooked factors which would contribute largely to our success in emergency surgery and factors which, if intelligently employed, will lessen the suffering, reduce the temporary disability and limit the degree of permanent injury of the patient. My only thought in introducing the subject at the present time is that I may influence you in some measure to abandon prejudices and to investigate with an open mind what physical therapy has to offer you in the daily pursuit of your professional work.

If studied without prejudice, I am satisfied that the physical therapist will soon hold a place in the staff of the busy surgeon similar to that now occupied by the expert in the use of the x-ray or of radium.

I have come to feel that the omission of this line of supplemental treatment in many emergency cases can only be looked upon as a definite neglect, since its employment not only shortens the period of temporary disability, restoring function more promptly, but also favorably modifies the permanent partial disability.

Many of our patients, victims of industrial accidents or injuries, are brought before Industrial Boards shortly after the removal of splints and bandages and just before or immediately following their return to work, when, under ordinary circumstances, the surgical treatment is regarded as completed, but when a large degree of disability remains. It is the common

*Read before Annual Assembly Tri-State District Medical Society, Waterloo, Iowa, Oct. 4, 1920.

experience that these patients improve materially during the number of weeks after they have resumed work and after ordinary surgical treatment has been discontinued. Their appearance before Industrial Boards, greatly disabled, at the conclusion of surgical treatment gives rise to faulty opinions in determining the actual conditions of the individual.

In such cases as these, massage hydrotherapy and elctrotherapy could be regarded as an essential part of the surgical treatment. These men would appear before Industrial Boards with a much higher degree of restoration of function and incidentally, would be returned to their employment very much earlier. In fact, after the surgical treatment is supplemented by the intelligent use of physical therapy the surgeon does not dismiss his patient until the end result has been actually attained and speculation as to the future is no longer necessary.

Supplemental treatment is especially desirable in functional and traumatic neurosis, in malingering, in vague pain symptoms, in fractures, and in extensive scar formation, especially when limiting motion.

In the treatment of fractures, the duties of the surgeon do not end when apposition is secured and splints applied. We cannot dismiss as cured fractures at this stage. It is unfortunate that the same control is not in effect as was in the Army. A campaign of education must be carried out in order that the value of such measures may be generally known. Considerable headway can be gained in the removal of both temporary and permanent disability by early activity and positive motion and in addition with massage in the after-treatment. Massage applied without disturbing apposition will unquestionably decrease the time required for union and I am satisfied that electricity, with massage in the hands of a competent person will accomplish even more. In the treatment of swelling and pain, a current producing diathermy for fifteen minutes at a sitting, thoroughly warming the entire area, is of distinct benefit. This does much to relieve both the pain and the swelling. This treatment, in my opinion, should be given soon after the splints are applied. In recent fractures we use diathermy, applying the electroids beyond the ends of the splint stimulating a large portion of

the limb, increasing the nutrition of the parts, and tending to guard against active congestion and degeneration.

One applies the use of physiotherapy in the treatment of purely functional cases with considerable reluctance because it is in these cases that it has been most flagrantly abused by charlatans and cultists. I am entirely unable to say what it will actually accomplish in these cases, but in organic conditions there is not the slightest doubt of its value. Practically every post-casual condition, except infection and malignancy, will improve under scientific physiotherapy employed in overcoming shortening of the fibroclastic elements in tendons, softening and freeing adherent scars, and in the relief of pain and swelling. Incidentally, serious physiotherapy carried out by the scientific masseur who understands anatomy, physiology and pathology must not be confused with the absurd massage gymnastics commonly found in our barber shops or Turkish bath establishments.

Incontestable evidence of the value of recently developed physical after-treatment has been given by Chas. P. Hutchins from his experience at Fort Sheridan, where 4,700 beds were assigned to patients undergoing reconstructive treatment. In many instances, the cures and improvements obtained are quite astounding.

Negative galvanism, which attracts hydrogen, may be successfully employed to overcome cicatricial contraction. It is remarkable how the scars can be freed. Almost without exception scars tending to limit free joint action are improved or yield entirely, becoming soft and cease to retard function. In my own experience, a slow sinusoidal current is best for employment in positive muscular exercise.

The success obtained in the employment of heat depends very largely upon the depth to which the heat is conveyed. On this account, hot water bottles, hot poultices, and fomentations are of little value except in superficial conditions and to promote drainage by keeping the serum from coagulating. The rapid circulation in the blood vessels promptly carries away the excess heat.

Radiant light, which penetrates from two to four inches in tissues is more satisfactory. Local treatment by electricity in the form of dia-

thermy, produced by passing high frequency current through the tissues, is far more valuable than either in increasing phagocytosis, metabolism and nutrition. The tissues are uniformly heated through the electrodes up to about 110 degrees Fahr., thus rendering the tissues hyperemic for a considerable time.

As is generally recognized, fibrous and scar tissue may cause considerable pain by entrapping a nerve filament and may limit motion in joints and restrict the function of tendons and muscles. This is improved by therapeutic lamps, massage and hydrotherapy or by hypotential current. The softening influence of the negative galvanic poles when applied by proper technique is well established.

In case of body ankylosis, of course treatment must be instituted during the activity of the pathologic process which produces the ankylosis. Fibrous ankylosis is quite amenable to physiotherapy and especially to diathermy, the results often being very surprising.

Medical ionization is often used very satisfactorily in connection with galvanism. The treatments are given on alternate days but some little discomfort is experienced by the patient.

The deep effect of diathermy has been demonstrated by Captain Sampson in the following experiment:

A thermometer was placed two inches under the skin of a rabbit and a 200 Watt leucodescent lamp was used for ten minutes with the result that there was an elevation of temperature of two degrees. With a 200 Watt incandescent lamp placed in the same manner there was no elevation of temperature. He then employed diathermy, using 600 milliamperes for 15 minutes without the slightest degeneration or injury to the tissues. We know that diathermy used in a similar manner will elevate temperature of tissues 10 or 12 degrees, at most any depth.

Radiant heat and light have supplanted ordinary heat in therapeutic procedures since the heat penetrates deeper into the tissues and reaches a higher degree of elevation and at the same time there is unquestioned benefit in the light itself. Open wounds and old indolent ulcers heal much more rapidly under the influence of radiant heat and light with far less pain and with the least possible scarring.

Conductive heat illustrated in the hot water

bottle has very distinct limitations of usefulness. It cannot transmit any high degree of temperature to the tissues and is not without danger. In the use of diathermia the degree of heat is absolutely controlled by the operator who should be acquainted with the basic law of its administration. The amount of heat generated in any given tissue varies with the resistance of the tissue, the higher degree of resistance being found in bone, callous, or dense fibrous tissue. With a few simple facts borne in mind, diathermic treatment is entirely without danger and not only is it painless, but it distinctly relieves pain, many patients stating that there was no pain or discomfort experienced after the first treatment.

Hydrotherapy is employed in the after-care of emergency cases, preferably on account of its stimulating and eliminating effect. The most stimulation is afforded by alternating heat and cold; this process materially relieving congestion.

Electricity is employed frequently because of its polarity effect. The positive pole is sedative, acid in reaction and attracts oxygen. It is a vaso-constrictor and is strongly antiseptic. The negative pole is exactly the opposite. It is stimulating, alkaline, attracts oxygen, is a vasodilator, and is not antiseptic. Its chief use in these classifications is in ionization for the loosening of scars where chlorine or other drugs are used from the negative pole. Electricity is employed for muscle stimulation in the form of a slow sinusoidal current. This exercises weak muscles and is not painful.

The faradic current is employed for limiting degeneration and for the relief of pain. In cases of neuritis and in sprains, the static current is used. The most skeptical will become enthusiastic at the results obtained from the proper application of the static wave in sprains.

In sketching thus briefly the possibilities of physical therapy in the after-treatment of traumatic cases, I desire merely to suggest to those who are present the great advantage there may be obtained by the utilization of these relatively simple therapeutic means which are familiar to us all and which we have permitted to be appropriated by irregular practitioners and quacks. Employed intelligently in conjunction with established medical or surgical procedure—it promises much.

DISCUSSION

DR. ROLAND HAZEN (Paris, Ill.): Electrical therapy in the past has been confined to the use of the galvanic and the faradic currents. The newer types of currents that have been developed in recent years were at first exploited by the unscrupulous, and therefore soon became associated with charlatanism. That there is real therapeutic merit, and definite indications for the uses of these newer developments in electricity has been clearly shown by Dr. Deal.

Hydrotherapy for local treatment is just as valuable as hydrotherapy in general treatment, and the virtues of the latter are well established. The principles of this treatment are dependent upon the vaso-motor exercise which it incites, thus improving the tone and the rate of the circulatory changes, and thereby improving the metabolic changes and hastening the absorption of exudates. An extremity put to rest in fixation is similar to the body as a whole put to rest as in confinement to bed in illness or following an operation. When the patient first gets up there is weakness, and giddiness in the head. In this case the vaso-motors have not been receiving their accustomed physiological exercise, and therefore do not at once respond to the demands of the upright position; in other words they have become lazy, and normal strength can only be acquired by the physiological vaso-motor exercise coincident with being up and about, unless it be stimulated artificially by hydrotherapy and massage.

Massage has for some time had a recognized place in the after care of fractures, the treatment of traumatic exudates, and ankyloses. That it is tedious of application is the chief reason for its not being more universally adopted, but this is a weak excuse for not organizing our work so as to afford this benefit to our patients. There is no doubt that massage hastens the absorption of the exudates, improves the muscular tone, and induces vaso-motor exercise.

The simplest method of effectively applying the combined benefits of hydrotherapy and massage to an extremity, that has come to my attention, and the method that I have applied as a routine for a number of years, is as follows:

The patient is instructed to prepare two buckets of water. One with cold water, and the other with water as hot as can be borne to the touch. The extremity is then immersed in the hot water, and while thus immersed the part is rubbed, or massaged, from below up to favor the venous return. This is continued for five minutes, when the part is then thrust into the cold water and the massage continued for five minutes. The part is then returned to the hot and again to the cold for five minutes each. Thus there are four immersions of five minutes each accompanied throughout with massage, and ending with the cold. Passive movements follow this course when they are to be employed. Our patients are directed to go through this procedure twice daily.

WHY THE MASSACHUSETTS PHYSICIANS OPPOSE THE SO-CALLED MATERNITY BILLS

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The Medical Profession as a whole in Massachusetts has been opposed to all the proposed Maternity Bills which have been presented to the Massachusetts Legislature. It has been opposed on the ground that it would be state medicine in part. It has been opposed on the ground that these laws were only the entering wedge for compulsory health insurance. It has been opposed on the further ground that the condition of obstetrical practice in Massachusetts did not demand such laws.

The Massachusetts Maternity Commission, so-called, was appointed to investigate the question of pre-natal and post-natal aid and care for mothers and their children, and made its report to the Massachusetts Legislature in November, 1920, at a special session. Their report was referred to the Legislature of 1921. This Legislature referred the matter to the Committee on Public Health and the Committee on Social Welfare sitting jointly. This joint committee gave hearings, and reported to the Legislature "leave to withdraw" to the petitioners. In the House, "leave to withdraw" was changed to "reference to the next General Court" which in Massachusetts means the next Legislature.

The Maternity Commission reported an act entitled "An Act for the Better Protection of the Life and Health of Mothers and Infants." Section 1 of this Act is as follows: "The Department of Public Health is hereby authorized to provide advice, instruction, and visiting nursing care to women during their pregnancy and confinement, and to mothers and their infants after childbirth, regardless of their financial condition."

The physicians of Massachusetts strenuously objected to this section which gave to the Department of Health such comprehensive and sweeping powers. Under this act, these powers were to be executed by a single commissioner. Section 4 of the Act said: "The Department of Health may make, may alter, revise, or amend all reasonable rules and regulations necessary to the execution of this act, and no mother shall be eligible

to the provisions of this act unless she shall comply with the same."

The physicians of Massachusetts objected to said authority which should "provide advice, and instruction to women during their pregnancy and during their confinement." If these words "provide advice and instruction" were taken to the Supreme Court for interpretation, what is the interpretation which might be put upon them? Would it mean that the Commissioner could instruct and advise women to patronize or to engage certain doctors? Would it mean to advise and instruct women to go to certain lying-in hospitals? Would it mean that this advice and instruction for their care could be better carried out by one set of doctors rather than another? It would seem that no advice or instruction to women during their pregnancy and confinement would be suitable unless it coincided with the ideas and preconceived notions of the Commissioner of Health.

The physicians of Massachusetts were astounded to think that any such plenary powers would be given by statute to any body of men. They felt that such an act would open the way to all kinds of confusion and misunderstanding. For if this authority were given to certain officials, it would necessarily follow that if the state authorized it therefore it must be good and better than could be provided by private individuals. The intelligent physician in Massachusetts was fearful what might happen under some circumstances if the Commissioner of Health was not a level-headed, wise, and just Commissioner. Moreover, it was the first recognition legally of nurses as a part of the machinery of the practice of medicine, because it gave the nurses, under this act, a standing, without perhaps the responsibility, that the nurses have never had in any state as far as the physicians of Massachusetts are advised.

The physicians were opposed on account of the expense that would be entailed for the hiring of so many nurses as would be necessary to carry out the scheme because under the act any pregnant woman in the state, regardless of her financial condition, could call upon the authorities for aid.

Section 4 was objected to because it provides that if a woman otherwise eligible for these benefits did not see fit to comply with the instruction and the rules of the Department of Health she would lose her benefit. There are many women

who might object to certain rules and regulations that a Commissioner might make and justly so. She would, therefore, lose her opportunity of availing herself of the benefits.

It has been said that ordinary people in our Legislature make the laws. The extraordinary people, who sit upon the benches of our Supreme Courts in the several states, interpret the laws, and I am sure that the interpretation of this law would be such as would give the Commissioner of the Department of Health the widest latitude in conducting this department that would be possible for any man to ask. These are some of the objections to the so-called Maternity Acts in Massachusetts.

To recapitulate, it means nothing more nor less than an entering wedge for compulsory health insurance. It creates unnecessarily another large class of state workers inasmuch as there must be employed a large number of nurses, some of whom will be ordinary nurses, some of whom will have charge of a district of nurses, some of whom will be instructors of nurses, and all the trail of offices that usually go, according to our modern methods, to make up what is termed an efficient force. To say nothing of the fact that every woman who applied for these benefits would, in all probability, be card-catalogued, and a description of her physical condition, past and present, would be entered in the archives of the State Department of Health.

Space is too short to tell of the possibilities of such an act. To their credit, it may be said that the opposition on the part of the Medical Profession of Massachusetts to these bills was almost unanimous. It behooves the profession of the State of Illinois to be on their guard against any of the proposed sugar-coated, quasi-philanthropic schemes that the uplifters and the altruists are willing to provide at the state's expense for the propagation of the human species.

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MEGALACOLON*

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Megalacolon or Hirschsprung's disease is an enormous dilatation of the greater part or all of the colon, with marked thickening of the walls

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and with no discoverable cause. The condition was first described by Hirschsprung in 1886, although Billard and Barry as much as sixty years before had reported instances of "enormously distended colons, with no apparent obstruction." Since that time extreme enlargement of the colon has been divided into two distinct types; the first—congenital, ideopathic dilatation of the colon, or true Hirschsprung's disease is infrequently met with; the second type is acquired, is frequently found, and is an enormous dilatation of a part or all of the colon due to mechanical obstruction of more or less long standing.

The etiology of the two types of megalacolon is very different. The cause of Hirschsprung's disease is not known. Da Costa considers it an anatomical anomaly. The cause of the acquired type is an obstruction of the lumen of the colon. The gradual narrowing of the lumen by a slow growing neoplasm, or by adhesions, with increasing difficulty in the passage of fecal material by the point of obstruction, results in a dilatation of the colon, proximal to the point of obstruction.

The pathology of the two conditions likewise differs sharply. In the congenital type of dilatation the walls of the distended gut are increased in thickness as much as one-eighth of an inch and have a leathery feel. The characteristic markings are apt to be absent, even the white line is gone. The mesentery may be thick and edematous. In instances of acquired dilatation of the colon obstruction of the lumen of the bowel will be found. The walls of the distended portion of the large gut are thinned, sometimes to a remarkable degree. This is more especially true when the obstruction has not been of long standing. When the narrowing has been a matter of months the walls of the distended portion of the gut become thickened as a result of the excessive peristalses that take place.

The symptomatology of the two types of megalacolon is much the same. In Hirschsprung's disease there is a history of stubborn constipation. There are frequently times when the patient is unable to have a bowel movement for several days. Guy² has reported an extreme instance that went three months without a bowel movement. At these times there is a huge distention of the abdomen, and cramps and severe pain are frequently complained of as a result of

the excessive peristalses. The other symptoms usually associated with obstruction of the bowel are then apt to become manifest. When the obstruction of the bowel is not complete, malnutrition and ill-health as a result of toxemia may occur. Della Valle³ has recorded the death of a five year old boy of toxemia from a megalacolon with intact mucosa. He found in the literature two similar instances.

While costiveness and frequent attacks of extreme difficulty in getting the bowels to move is the rule, there are instances, however, in which the condition has been present for years without symptomatology. Edward Howard⁴ of London found a true congenital ideopathic dilatation of the colon at autopsy in a man sixty-five years old. Sommers⁵ reports an instance with sudden onset for the first time in a child of thirteen years.

The diagnosis of Hirschsprung's disease should be easily made if this condition is kept in mind. The age of the patient is of importance since it is most apt to manifest itself in childhood. There is usually a history of stubborn costiveness or frequent attacks of almost complete obstruction⁶ of the bowel. During these times the abdomen is hugely distended, is so tense that nothing definite can be determined by palpation. After the patient has been relieved and the abdomen becomes soft, physical examination is again negative. Nor does the proctoscope or a study of the stools lead to positive information. The giving of a bismuth enema, however, followed by a screen or plate examination reveals the trouble at once. The huge enlargement of the colon throughout its entire length or, usually, throughout only a part of its length, is absolutely characteristic of Hirschsprung's disease.

In instances of acquired megalacolon, the patient is generally an adult, since anular carcinomata of the colon, adhesions and other conditions which usually cause obstruction are prone to occur later in life than childhood. The constipation becomes more and more obdurate. At a time when the abdomen is not greatly distended, physical examination may reveal the presence of an unusual mass at some point along the course of the large bowel. Or a proctoscopic examination might reveal a low-lying stricture,

ulcer or carcinoma. An X-ray study would undoubtedly reveal the point of narrowing and give some information as to its cause.

I will cite two cases of acquired megalacolon in point:

Miss S., aged 24 years, a clerk, was taken ill with what was diagnosed as appendicitis. She was treated by the Ochsner method for some ten days when an operation was advised and accepted. Upon opening the abdomen a large tumor presented which quite filled the abdominal cavity. This proved to be the cecum and ascending colon. There was a band of adhesions constricting the transverse colon beyond which the intestine was empty. The band of adhesions was divided and the liquid feces began to pass alone. The patient recovered after a stormy convalescence.

Case 2: Mrs. M., aged 65 years, had suffered from constipation for some time and had used laxatives quite regularly until she embraced the Christian Science faith; she then threw aside the physic.

I was called to see her at a healer's home and found an elderly lady with greatly distended abdomen, vomiting fecal matter. I elicited the following history. She had had no bowel movement for more than two weeks, but had continued eating heartily in the meantime and for the past week had been under treatment by the healer. She was removed to the hospital, refused operation and died at the end of three weeks, still strong in the faith.

A post-mortem examination revealed an annular carcinoma of the sigmoid and above this the colon dilated into a tumor larger than an adult head, and full of liquid feces. One would scarcely believe the colon capable of being so distended as was the case in these two patients, but they lacked the thick wall and leathery feel that the true megalacolon exhibits.

The history of a third patient is quite different:

K. S., aged 6 years, of Holland Dutch descent, was brought to the hospital December 20, 1919. The family history was unimportant. Her personal history was that of having suffered since birth from costiveness for the relief of which enemata or physic had been used almost daily. When six months old she had an obstruction of the bowel which was relieved by the injection of one pint of oil. At two years of age she had a similar attack, being finally relieved by enemata. She frequently suffered from severe colic and obtained relief by lying down upon her abdomen, when flatus was expelled and relief obtained.

One year later she was taken to Chicago for an x-ray examination and for treatment. She was six weeks in one hospital and five in another. No definite diagnosis was made, but she was given Russian mineral oil in liberal doses and got along fairly well until the present attack.

When first seen by us her bowels had not moved for some days and morphin had been given repeatedly to control the severe cramps. Physical examination showed her to be a frail, undersized child. The abdomen was enormously large and the lower

ribs flared markedly. The pulse was fast. She had no temperature. Hot applications to the abdomen, various enemata, varying postures, etc., gave no relief from pain and no bowel movement and after twelve hours her condition apparently not permitting of further delay, she was submitted to operation.

Under ether anesthesia a median abdominal incision was made. A greatly distended viscus presented which was at first taken for the stomach, but upon further study it was found to be the colon, although it had quite lost the characteristic markings of that organ. The wall of the gut was very thick, the white lines had disappeared and it had the feel more of leather than living intestine. It was some six inches in diameter and extended from the hepatic flexure downward, increasing in diameter until within two and one-half inches of the anus, where it suddenly became the size of a normal gut. The sigmoid, which was the largest portion was so crowded into the pelvis that it kinked, thus causing the obstruction. The mesentery was thick and edematous.

The condition of the child did not warrant a formidable operation, and the mechanical difficulties connected with the attachment of the small intestine to the short bit of a rectum would have been great. We, therefore, determined to carry the sigmoid across to the cecal region, attaching it to the abdominal wall, thus carrying it out of the pelvis and relieving the kink.

At McBurney's point we put a small rubber tube through the abdominal wall and into the distended bowel, through which we could irrigate the colon. Upon the return of the patient to her room an enema brought immediate results and the distention subsided.

The colon was irrigated daily through the rubber tube and injections of Bulgarian bacillus given. The child gained rapidly in health and strength. After some weeks a small fistulous opening, through which some gas and feces would escape at time, was still present. This finally closed. When last heard from the child was reported in good health.

The medical treatment of Hirschsprung's disease, consisting of laxatives, daily enemas and massage offers temporary relief. A cure, however, can only be effected by surgical procedures. Resection of the colon and anastomosis of the proximal and distal ends is undoubtedly the operation of choice when the condition of the patient will warrant such a formidable procedure. The mortality is very nearly fifty per cent. when this is done.

A safer line of procedure consists in first making a colostomy, later resecting the dilated portion of the gut. Sommers⁷ in a child of thirteen years followed this plan. Two weeks after the colostomy a median incision disclosed an enormous sigmoid flexure. A small incision was then

made in the left groin through which the sigmoid loop was pushed and sutured to the abdominal wall. Two days later the sigmoid loop was resected.

Still another method of procedure is similar to the one adopted by us. Mr. Markings⁸ of England corrected the position of a kinked loop in a Hirschsprung's disease "and fixed it with good effect." Perthus⁹ has described in detail a case in a lad of fifteen years "where a valve formation in the sigmoid was the principal factor in the trouble." He restored the patient to health after five laparotomies in the course of three years. He found two similar instances of valve formation in two other cases at autopsy.

In our patient the kinking of the hugely dilated sigmoid flexure was the final factor in bringing on her attacks of obstruction of the bowel. Whether the relief she has obtained by drawing the bowel out of the pelvis and fixing it on the abdominal wall will be permanent remains to be seen. If relief is not permanent one of the more radical procedures can be effected.

CONCLUSIONS

1. True Hirschsprung's disease is a congenital anomaly and dates from birth. It differs much from the acquired form in the physical appearance of the colon and mesentery.
2. Its rarity makes the proper diagnosis less likely.
3. It may be treated with some success by enemas and massage.
4. A cure requires surgical measures, which may consist of—
 - a. Resection of the colon and anastomosis of the proximal end to the rectum.
 - b. Making a colostomy and later resecting the diseased portion.
 - c. Correcting the position of the colon, thus relieving the kink and attaching the same to the abdominal wall after introducing a tube through which to treat the colon.
5. The latter is a safe procedure where the condition of the patient is bad, and paves the way for resection later should it become necessary or advisable.

REFERENCES

1. Da Costa: Modern Surgery, 7th Edition.
2. Guy, Quoted by Da Costa.
3. Della Valle: Jour. A. M. A., 1919, Vol. P. 109.
4. Edward Howard of London.
5. Sommers: Jour. A. M. A., 1909, Vol. P. 903.

6. Ochsner, A. J.: Personal Communication.
7. Sommers: Quoted above.
8. Markings: Quoted by Binnis. Operative Surgery, 6th Edition, Page 400.
9. Perthus: Jour. A. M. A., 1905, Vol. P. 1206.

THE CARE OF THE EXPECTANT MOTHER*

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Abstract: Maternal mortality of childbirth. Prenatal care: definition; program followed. Benefit to the individual and to society.

Childbirth is at present a greater hazard to the child-bearing woman in the United States than any disease except tuberculosis. Our death rate of 15 per 100,000 population from this cause is over twice that of Sweden's, is fourteenth in the list of maternal death rates out of sixteen leading countries, and is only exceeded in this field by that of Switzerland and Spain. There has been no decrease in the death rate from this cause in the registered area of the United States in the twenty-three years, 1890 to 1913. The seriousness of these facts is mitigated only by another fact, namely, that this deplorable condition can be remedied, or rather that its continuation may be successfully curbed, by an intensive and widespread campaign for prenatal care.

Briefly, prenatal care implies two concepts: first, the education of the lay in the matter of pregnancy *sans* superstition and tradition; and second, greater attention on the part of the physician to the pregnant woman's complaints and to the earliest evidences of impending danger.

The pregnant patient must be taught to present herself for examination as soon as a diagnosis of pregnancy can definitely be made, and that is almost always possible when the second menstrual period has been missed. This first meeting gives opportunity to the physician to pave the way for the educational work to be carried on in the months to follow. The confidence of the patient is won over, assurance is given her that she may ask all the questions she may desire to during her pregnancy. Good books and pamphlets are referred to as well as the manner in which they may be procured. A careful history is taken and the patient is examined.

The first examination should be complete, in-

*Read before the Chicago Medical Society, Oct., 1920.

cluding a careful physical examination as well as blood-pressure and urinary tests. In a routine examination beginning with the face, edema is sought, and the presence or absence of hypophyseal and adrenal alteration of features noted. The mouth is carefully examined, the condition of the teeth and tonsils receiving especial attention. In the examination of the neck, the thyroid gland is palpated, the patient sitting upon the table with the head well extended. When enlargement is found, which occurs in about thirty per cent. of my cases, signs of exophthalmic goiter are also sought. Finally, the neck is measured by placing a tape at the point of greatest diameter and noting the circumference. This finding may be used as a basis for comparison should the question of increasing growth of the gland arise later in pregnancy.

The chest of the patient is examined, especially for evidence of tuberculosis; the heart for hypertrophy and for valvular disease; the breasts for lumps, nipple inversion, and abnormalities of growth. The abdomen is palpated with a view to testing the recti muscles and for evidence of inflammatory processes in the gall-bladder and appendix. Kidney mobility or swelling, palpable spleen, tumors and other swellings are also sought. The uterus is palpated if above the symphysis, its size and form noted, and estimation of term is made and is compared with that determined from the menstrual data. The bony pelvis is next measured with the pelvimeter, the measure of the interspinal, intercrystal, Bandelouque and inter-trochanteric diameters being recorded. When these are found to correspond to the normal, no other measurements are essential. When a disproportion or narrowing is found, the obstetrical conjugate and outlet measurements are taken.

The patient's back is examined for spinal curve, the shape of Michaelis' rhomboid observed, and the sacro-iliac synchondroses palpated for tenderness. (Many of these women suffer sacro-iliac pain and can easily be relieved.)

Next a careful pelvic examination is made. The perineum is examined for its integrity, labial and hymenal faults, urethral and Bartholinian glands for evidence of infection, the cervix for tears, malignancy or other abnormality. The pubic arch is palpated for its acuteness or obtuseness, the ischial spines for abnormal incurving, and the coccyx for its length and mobility; the

shape of the sacral curve is determined, the promontory sought and if reached by the finger, the internal conjugate is measured. The size, position and mobility of the uterus are determined and the adnexa are palpated for evidence of swellings.

Finally, the lower extremities are examined for evidence of edema, varicose veins, ulcerations, etc. The blood-pressure, systolic and diastolic readings, is taken and recorded, and the urine examined completely. A Wassermann test has not been made a part of my routine, but is taken where the history or some findings suggest it.

Physical examination alone, however, does not constitute care. *The complaints of the patient* are carefully noted and special inquiry is made concerning bowel regularity, urinary difficulty or distress, history of any bleeding from the vagina, backaches, headaches, previous pathological labors, etc. For convenience in handling large numbers of cases in clinic the following instructions¹ are printed upon the registration card which is given each new patient, and the latter is urged to read carefully and to follow the directions. In private practice a somewhat modified list is given and more attention is paid to personal individual instruction.

MICHAEL REESE HOSPITAL

SOCIAL SERVICE DEPARTMENT

Date Ward Record No.....

Referred to Dept. by.....

Name Age.....

Care of

Address Fl. { Back } .. Rent.....
 { Front }

Nativityin U. S.....Civil Cond. S.M.W.D.

Family

Children's Ages

Neares { Relative
 { Friend

Occupation

Wage-earners in Family.....

Lodge or other income.....

Admitted Discharged.....

Diagnosis

Readmitted Discharged.....

Diagnosis

Referred to

Referred to

Charities Interested

Remarks

(2) Legend: Blank filled in by Social Service Dept.

MICHAEL REESE HOSPITAL

PRENATAL CLINIC

GENERAL RULES TO BE FOLLOWED DURING PREGNANCY

1. Register at the Hospital as early in pregnancy as possible.
Clinic Days—Mondays and Thursdays at 9:00 A. M.
2. Bring a bottle of urine every time you come.
3. Wear proper clothing and shoes according to weather;
no round garters.

4. Bath in tub every day, if possible, until confinement.
 5. Bowel movements are necessary every day.
 6. Drink plenty of water (eight glasses daily); do not overeat, and last six weeks take very little potato, bread, sugar (candy, etc.).
 7. Have teeth treated by dentist whenever needed during pregnancy. Brush the teeth every day.
 8. With first baby, in last six weeks bathe every day and take sweat bath once every week. (Hot bath in tub for ten minutes, then get into bed between blankets, have hot water bottles in bed, take a hot drink, and sweat two hours.)
 9. Come to the Hospital at once if you have: severe headaches, much swelling of legs, bleeding.
 10. Telephone before coming to the Hospital when in labor.
- CALUMET 5560.

It is possible in a well regulated clinic where social service nurses are available in co-operation with the medical staff to follow these patients home and see that the instructions are read and carried out. This has been a great asset in our work at the Michael Reese Hospital where four splendid graduate nurses, who are exceptionally well qualified for this work, are untiring in their zeal to educate these women in hygiene. The nurses are also present at our clinics where they fill in for the illiterate patients a complete questionnaire² concerning their mode of living, number of wage-earners in the family, and other data relative to the economic status of the patient.

In the week following their registration in the clinic our nurses visit the patients in their homes where they complete the information desired. They are usually received as angels of mercy. Food, fuel and clothing, when lacking, are procured through charitable agencies, and provision is made for the little ones while the mother is in the hospital for confinement. Those who can afford it are urged to pay a minimum fee to the hospital, thus avoiding pauperization; no charge is made for physicians' or nurses' services either in the clinic or in the hospital.

In reference to the economic status, the report of Julia C. Lathrop is illuminating. She has recently published the results of a study of "Income and Infant Mortality." Observations were made in eight cities of families where the father's yearly earnings reached a maximum of \$1,250. Of the fathers of 23,780 babies born (including still-born), more than one-fourth earned less than \$550 in the year following the birth of the child. Only one in eight earned as much as \$1,250. Miss Lathrop found that the lower the income the higher the infant mortality, and that as the income doubled, the mortality was more than halved.

In Boston the Women's Municipal League has carried out an effective plan of co-operation with the Boston Lying-in Hospital. There a nurse calls at the hospital in the morning and is given the names of the patients registered since her last visit. She then goes to their homes, explains her work, makes friends with them, and arranges to visit them during the following week. Each case is visited once in a week or ten days and if anything is wrong, frequent or even daily visits are made. No responsibility is taken by the nurse beyond the simplest remedies: plenty of water both inside and out, fresh air, rest when possible, not too hard work, etc. If the difficulties of the patient do not yield to these measures, she is sent to the hospital or clinic for the physician's examination and advice. The expense per patient figures out to be about three dollars for this care for the whole pregnancy, including the nurse's salary and her carfare. This suggests great possibilities for extending prenatal care in private practice.

No branch of medicine is so full of faulty notions, handed down from mother to daughter and passed from neighbor to neighbor, as is obstetrics. This is true, no doubt, because much of the prenatal instruction rests with laymen and with ignorant midwives, and is not based upon scientific treatment. Physicians no longer believe in the maternal impression theory, yet we hear that witnessing a fire during pregnancy will produce an hemangioma on the face of the child; or, that the race-horse in foal seeing the camels in the circus parade gave birth to a cyclopean colt bearing resemblance to a camel. It is unnecessary to reprint here what has already been published on the subject of superstitions in obstetrics and which is available for reference. However, it is our duty to be ourselves informed on this subject, and to discourage these superstitions in our own patients. Too often the busy physician answers the questions of his expectant mothers on these subjects with a "yes, yes my dear," when he should take a few minutes to explain the *no*. Perhaps he harbors the same views, for superstitions die hard.

The pregnant woman often presents symptoms the origin of which may be entirely incidental to gestation, and these complaints are too frequently sidetracked by the physician because of a peculiar and unwarranted fear of treating women during pregnancy. The stereotyped

(1) Legend: Instructions on back of patients' registration

answer to her complaints is "it's just a part of the pregnancy." Thus the pregnant woman must bear the cross: the backaches, toothaches, headaches and still more backaches! All these legitimate cries for help are ignored, yet if they were uttered by a strong, healthy man, they would be the cause for rigid investigation with institution for immediate measures for relief. The expectant mother becomes martyr to it all because the well-meaning family doctor is wont to say: "after the baby comes you will have no more of it." Thus she resigns herself to months of suffering only too often to find that the old ache is still there after the puerperium is past. Her query is then answered by the assurance that the trouble is now due to weakness from the confinement and that with increasing strength it will disappear.

Why should the teeth be neglected during pregnancy? Because they decay faster? The more reason they should receive prompt attention. If a woman is in the habit of brushing her teeth once per day, I advise twice per day during pregnancy. I advise her to have her teeth examined early in pregnancy and if any are in need of dental work to attend to them promptly. Should the dentist find a decayed root, I see no objection to extraction under gas and oxygen or with local anesthesia, providing he knows the condition. No little opposition is met with, however, by the dentists, for frequently a patient will return complaining that her dentist refuses to do anything for her while pregnant. Upon inquiry I find also that there is no uniformity of opinion among dentists as to how much, if any, the work should be limited, and which constitute the "danger months" in pregnancy.

Likewise with many other neglected conditions: why are cathartics, wisely chosen, worse than constipation? Why proper corsets worse than pendulous belly, diastasis of the recti and oblique axis of the uterus? Why are long, non-constricting garters worse than round garters and strings with their resultant huge varices and increased edema? Why the daily cleansing tub bath worse than sealed pores and parasitic skin affections which thrive for the want of them? An investigation of the cause of the pregnant women's complaints will readily suggest means for their relief.

My patients are interviewed personally once

per month, and oftener if the condition warrants it. At these visits the blood-pressure and urine examinations are made, and the results compared with those of the preceeding visits, thus any change in condition can be detected. In the latter months the abdomen is palpated for estimation of the size and the presentation of the fetus. Where the question of multiple pregnancy arises the x-ray has come to be very useful after the seventh month. The questions of the patient are answered as carefully as possible, and in these monthly visits not only do the doctor and patient become better acquainted, but many of the faulty ideas are corrected and the educational ball is thus started a-rolling in the right direction.

The question of diet, or rather of dieting, I determine in the individual case. To subject all women, weak and strong, fat and lean, elderly and young to a definitely outlined and set diet I believe is unscientific. As with everything else pertaining to human wants, the diet should be individualized to suit the requirements of the patient and not merely for a *case of pregnancy*. Many obstetricians diet their patients for the purpose of limiting the size of their offspring and thus render labor easier. I have not been convinced that such results have been obtained. It is admitted that the body-fat of the baby can be somewhat reduced by a rigid carbohydrate-free and fat-free diet of the mother, but the skull bones and the skeleton as a whole do not share in this reduction. Furthermore, the relative increase in protein of this diet would, theoretically, at least, increase the tendency to toxemia. Ehrenfest has summarized the literature on this subject in a late issue of the *American Journal of Obstetrics*.⁷

Careful and frequent observation of patients during pregnancy with explicit warnings of dangerous symptoms of impending toxemia, and prompt rigid dieting along with other appropriate measures such as rest, etc., at the earliest recognizable sign of trouble will reduce materially or even possibly stamp out that most dreaded of all complications: eclampsia. In our clinical work at the Michael Reese Hospital where we examine from twenty to forty pregnant women bi-weekly, we have noticed a marked diminution in the complications of labor in those cases where instructions were carried out.

One more phase of our antenatal program is

exercise. In prescribing the amount and form of exercise and in limiting the amount and kind of work, we are influenced by the woman's previous habits, her household duties, her physical condition and somewhat by her desires. Mothers' work in relation to childbearing is a subject which is today receiving the special attention of research commissions in all civilized countries, and is one which deserves our serious consideration.

What benefit then is to be derived from an extensive prenatal program?

First, pregnancy thus conducted arises from the depths of neglect and superstition to a height where the expected confinement may be anticipated with joy and security rather than dread.

Second, greater attention to the just complaints and findings of impending danger in pregnant women yields an economic benefit in conservation of human lives, in the lowering of morbidity for mother and child, in financial saving through lessening of days of illness and greater productivity.

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BIBLIOGRAPHY.

1. Meigs, G. L.: Am. J. Obst., 1917, XXVI, 392.
2. Lobenstine, R. W.: Am. J. Obst., 1917, LXXVI, 381.
3. Putnam, Mrs. W. L.: Proc. Nat'l Conf. Char. & Correct. Boston, June, 1911.
4. Titus, P. A.: J. A. M. A., 1918, LXX, 1493.
5. Paradise, V. I.: Bureau Publica., No. 34, Rural Child Welfare, Series No. 3. Children's Bureau, U. S. Dept. of Labor.
6. Lathrop, J. C.: Am. J. Pub. Health, 1919, LX, 270.
7. Ehrenfest, H.: Am. J. Obst., 1919, LXXX, 441.

RESULTS IN OPEN TREATMENT OF FRACTURES*

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In this brief report of results obtained by the open treatment of fracture it is not our purpose to discuss the relative merits of the open and closed methods of treatment, nor the advantages and disadvantages of the various operations that have been proposed, nor of the different devices that have been developed by those who have advocated open treatment. It is our purpose to briefly summarize our methods and results in a group of ninety-seven fractures in which we have employed open treatment in one form or another.

Selection of Cases: It has been our custom

to treat by the open method only those cases in which, in our judgment, it was impossible to *secure and maintain* satisfactory approximation by the older methods. It is recognized that there exists a wide difference of opinion as to what should be regarded as satisfactory approximation. End to end apposition of one-half to two-thirds of the fractured surface, with good alignment and without rotation deformity we have regarded as satisfactory without recourse to open methods. In cases in which these conditions could not be secured and maintained we have employed open treatment unless there existed general or local conditions which contra-indicated operative measures.

Methods employed: We have endeavored to employ in each individual case that means of fixation which seemed easiest of application in the particular condition presented, provided it sufficed to secure and maintain a satisfactory reduction until the proper fixation dressing of plaster or splints could be applied. Plaster casts, with windows cut out for after care of the wound, have been the means of fixation most frequently employed. Where plates or bands have been used it has been our custom to reopen the wound under local anesthesia and remove the plate two or three weeks before removal of the fixation dressing so as to allow time for the wound to heal before the patient's discharge. In open operations, particularly on the long bones, we have been impressed by the frequency with which strands of muscle, fascia, or periosteum have been found impacted between the ends of the fragments, often in such a location as to render entirely impossible anything like complete reduction by indirect methods.

After care: Patients who have had fractures treated by the open method should be given massage and active and passive motion after removal of the fixation dressing in exactly the same manner as patients treated by the closed method. The joints should receive early attention in order to avoid ankylosis, stiffness, and prolonged disability.

In our series of ninety-seven cases treated by open method the bones affected were as follows:

Femur, 26.	Radius, 5.
Humerus, 11.	Ulna, 1
Tibia, 14.	Radius and Ulna, 6.
Tibia and fibula, 12.	Clavicle, 4
Fibula, 1.	Lower Jaw, 2.

*Read before Annual Assembly, Tri-State District Medical Society, Waterloo, Iowa, Oct. 4-7, 1920.

Upper jaw, 1.	Metatarsal bones, 1
Patella, 6.	Olecranon, 2.
Carpal bones, 2.	Both radii and both ulnae, 2.
Metacarpal bones, 2.	

The means of fixation which we have employed are as follows:

Lane plate, 39 times.	Kangaroo tendon, 1.
Intramedullary graft, 2.	Parham-Martin band, 1.
Bone graft (sliding), 4.	Open reduction, no fixation device, 9.
Bone screws or bone pegs, 5.	Excision of fragment, 3.
Silver wire, 33.	Steel nails or screws, 6.

We have encountered the following complications:

Infection (simple fracture), 2 times.
Infection (compound fracture), 12 times.
Failure of union, 1.
Delayed union, 3.
Infection, failure of union—amputation (comp. fracture), 2.
Bone graft lost by infection, later union, 1.
Refracture by fall after removal of cast, 2.

Infection occurred in two cases of simple fracture which were subjected to open operation. In the first one of these, the fracture was a comminuted fracture of the femur with several large loose fragments. The patient's condition was extremely bad on account of shock and exposure. The operation in this case consisted of simple circular wiring of the ends of two of the fragments with silver wire. Notwithstanding the very simple procedure a very severe infection ensued, which resulted in a long standing osteomyelitis.

The second case was one with a comminuted fracture of both bones of the leg in an elderly man due to an explosion of dynamite. In this case there was extensive comminution of both the tibia and fibula with considerable bruising of the surrounding tissues. The operation carried out in this case consisted of a sliding bone graft, which was done about four or five days after the injury. Evidently the injuries to the surrounding tissues made conditions unfavorable for open operation; infection followed with loss of the bone graft and a long standing osteomyelitis which required several months to clear up.

In both cases healing finally occurred with union. In a few of the other cases there have been slight superficial infections which cleared up without any osteomyelitis after removal of the fixation device.

It has been our impression that the preservation of the periosteum is very important in open operations, especially on the long bones; that in no case should the periosteum be stripped or scraped from the bone field in applying the fixation device. In using the Lane plate we are very careful to preserve the periosteum, applying the plate outside the periosteum and after the screws have been turned down securely, they are given a half turn backward, in order to prevent pressure necrosis of the bone and periosteum.

THE TEETH IN THEIR RELATION TO SYSTEMIC DISEASE OR INFECTION, FROM THE STANDPOINT OF A RADIOLOGIST

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Lying (literally true) upon my office desk is an anonymous pamphlet, bearing the title.

PROSPECTUS OF THE 100 PER CENT. EDENTULOUS SOCIETY OF AMERICA AND THE WORLD.

Some clever chap in the dental profession has added further proof to the statement made by the lamented William Cowper Brann (of the *Iconoclast*), "Assail a fool with reason, and he answers you with calumny."

I am sorry that my audience cannot have the pleasure of reading this little comedy. Scintillating with a similar brand of wit to that which we would expect to find in a crutch or a funeral cortege, its only purpose being to prove that abscessed teeth are sadly abused by the radiologist and the physician.

It proves it, does it not? It does not. It proves that Brann was correct.

Let a concrete instance lead to my argument, and remember it is but one of many that could be cited.

Mr. R., an intelligent man of fifty years, came into my service for examination of teeth and chest. Eight apical abscesses and ventricular hypertrophy (concentric) were found. Without relating the usual details of physical findings, will say that the physician in attendance agreed

*Read before Annual Assembly, Tri-State District Medical Association, Waterloo, Iowa, Oct. 4-7, 1920.

that the teeth should be removed, and the sockets curetted. R. was referred to his choice of dentists, and he selected that one who had recently installed a very expensive bridge work system for him.

The dentist examined the films, remarked that there should be a limit to this new fad of blaming everything upon the teeth; assured R. that his mouth was in as good shape as dental skill could put it, and advised him to have his doctor seek some other cause for his indisposition.

R. had known this dentist twenty years. He believed in him, and when he went to his death six months later, he carried his bridges with him. A post mortem examination disclosed the same variety of bacteria growing upon the mitral valve, as were found at the apices of the condemned teeth.

Could not he have sacrificed all his teeth rather than his life?

Dentists as a class are rapidly aligning themselves with the part of the medical profession that believes in eradicating all possible foci of infection. Yet there are those who point to the fact that John Doe and Mrs. Roe have worn bridges and crowns upon devitalized teeth for many years, and have never suffered a day's indisposition. Let me here interplate, but for the resisting power of nature (*Vis Medicatrix Naturae*) the human race would have died out with the birth of the first baby. Doe and Roe must serve as exceptions and not rules for guidance. For whilst Mrs. Roe may be able to wash the Ford and change tires when needed, Mr. Roe may have so much trouble from one devitalized tooth that he cannot even shake dice without much physical misery.

It were useless to argue the matter. The yokel, who for the first time viewed a giraffe, said, "There ain't no such animal," expressed in few words the view of the opposition. A dentist acquaintance of mine, confided in me that he could tell just as much about a tooth by means of his explorer and some hot wax, as could I by x-ray examination. *He believes it.*

An argument against the intensive campaign against focal infections about teeth apices is "Thousands of innocent teeth are sacrificed on account of this fad." All right, but you can afford to sacrifice teeth better than life. A good set of "store" teeth are not prohibitive in price,

but even Mary Baker Patterson Glover Eddy could not raise the dead.

To obtain a thousand per cent batting average in dental film interpretation, it were first necessary to know the appearance of apical abscesses, and second, to not confuse them with other things.

I wish to call attention to certain avoidable errors in dental film interpretation.

The nasal outlet to Highmore's antrum, will sometimes register at the apex of a molar root. The appearance is so deceptive that it may be mistaken for an abscess. In event such a shadow is seen upon an otherwise apparently sound tooth (meaning that there are no evidences of dead nerves or root canal filling) a second exposure will move the foramen shadow, whilst the apical abscess clings to its own position at the root end. A stereo will also clear it up.

The anterior palatine canal between the superior maxillae can simulate a destruction at the apex of either upper central tooth, and if the angle or ray be exceedingly obtuse, the shadow may register over an upper lateral tooth. The shape of this canal is generally typical, it does not cast such a dense shadow as does rarified bone; and a stereo will tell the tale.

The inferior mental foramen may be mistaken for an abscess of a lower bicuspid. The shadow will sometimes register over a molar apex. In the eyes of the experienced, mistakes are not likely to happen. In event of doubt, stereo.

With these points in mind, it is possible to approach a trifle nearer to the thousand per cent. perfection.

After an experience extending over almost a quarter century of medicine, radiology and dentistry, an observer forms some rather hard and fast conclusions that have withstood the corroding effects of time.

I append some of mine.

A devitalized tooth is a foreign body in the alveoli. Once the nerve has died, the tooth receives no nourishment as the pericemental membrane (according to Noyes, Black and Howell-Smith) is structureless. If it isn't, blame them, not me.

It depends upon sublime Providence whether or not the tooth abscesses. I have seen abscesses over teeth without cavity formation; I have seen teeth with partially filled root canals, apparently unabscessed, but in this latter condition, a study

of the apex under magnification will generally show a trace of destruction.

Can such conditions be made sterile by treatment?

I have heard many dentists say "yes," but I have yet to hear a pathologist, who works with his microscope and culture media, give an affirmative answer.

Consider the fact that in a devitalized tooth, the dead nerve plus debris of food and germs of various kinds, must be withdrawn by the dentist; some may be left in inaccessible places, and some is not infrequently forced through the apex, in the endeavor to reach all part of the root canal.

In order to forefend this condition, I suffered the removal of a "live" nerve from a molar tooth, but x-ray checking from time to time caused me to have the tooth removed.

I have followed many cases, in the hope of seeing complete bone regeneration, about which I have read, and have seen films taken at various stages of the repair, and whilst I have an extensive clientele for x-ray dental work, I have yet to see a case of true bone repair. Now this is my misfortune, but I must tell the truth as it is revealed to me.

Now what is the use of all this waste of time and paper; what are my conclusions?

Simply this:

Educate the public to the axiom "Never let your teeth ache." If a tooth aches or has ached, have it removed by a competent dentist. Fill cavities as soon as they are discovered. Have teeth examined yearly (or oftener) by your dentist.

The next generation will show the effect of this propaganda.

A dental journal that reaches my office has hit the bull's-eye in the following advertisement. "The dentist is now held responsible not only for his patient's teeth but for his life." Help the dentists to realize this great truth.

The dentists that are backward about assuming their part in this newer status of things, are of the impression that when the x-ray film shows difficulties in the jawbones, it is a reflection upon their skill. Such is not the case. We must help them to know that there is no such thing as standing still. We must move forward or backward. Dental radiology is moving forward, and

even though it means a bonfire of the old order of things, let's all keep it moving forward.

HEMORRHAGIC DISEASE OF THE NEW-BORN.*

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Though this disease is one of the oldest known to man, it has always been surrounded with much confusion, and our present knowledge of the ultimate cause is still incomplete.

As with many other syndromes in medicine, the nomenclature is complex and confusing. Melena, hemorrhagic diathesis, omphalorrhagia neonatorum, hemophilia neonatorum are but a few of the terms found in the literature. Names applied according to the site of the bleeding have led to a further multiplicity of terms such as: purpura of the new-born, when hemorrhages occur in the skin; melena, bleeding from the intestinal tract; omphalorrhagia, bleeding from the cord; hepatic, adrenal, and cerebral hemorrhages. Unfortunately with so much emphasis on names characterizing the location of bleeding, the very fact that hemorrhages are usually multiple has been overlooked. Hemorrhage may occur in every organ and structure of the body and in varying combinations.

Warwick¹ reports that more than 50 per cent of the cases of hemorrhage occurring in the New-Born Clinic of the University of Minnesota have been multiple. At autopsy, hemorrhages have been found in the brain, lungs, liver, kidney, adrenals, skin, retina, and over serous and mucous surfaces. This is in agreement with Townsend's² observations which showed bleeding from the bowel and cord alone in only 22 out of 50 cases.

Lequex³, in his Paris thesis in 1906, gives a comprehensive review and bibliography of the subject. He illustrates the confusion and lack of knowledge by presenting four stages of historical interest and study.

1. Up to 1825. The period of confusion.
 2. 1825-1835. The period of clinical study.
- Widely varying causes were cited. Too late tying of the cord had its supporters, while too early ligation was quite as warmly advocated as a cause.

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3. 1835-1875. Pathological anatomical studies revealed a variety of lesions such as embolism, ulceration, patent ductus arteriosus, and other congenital heart defects. These, when found in conjunction with hemorrhages, were naturally pointed out as the etiology of the bleeding.

4. 1875-1906. The period of laboratory study. This being the era of development of bacteriology, it was not strange that the cause of the hemorrhages should be laid to bacterial invasion of the blood stream. Many of the pathogenic bacteria were charged as agents of the disease. Gartner⁴ in 1893 even claimed the discovery of a specific hemorrhage producing bacillus.

5. There can now be added a fifth period from 1908 to the present. Modern studies of the physiology of the blood, especially its properties of coagulation being the newer contribution—the causes of hemorrhages are sought in this field. It has also been suggested that certain changes in the vessel walls are involved in the disease.

Out of the chaos, Schloss and Commiskey⁵ have brought a simple, understandable classification of hemorrhages in the new-born. Hemorrhages during the first days of life may be:

1. Traumatic—from obstetric or surgical procedures.

2. Accidental—as illustrated by insecure tying of the cord.

3. Spontaneous—without apparent cause. Further spontaneous hemorrhages may be classified as:

(a). Symptomatic—incidental to diseases as sepsis, congenital lues, or in the offspring of families showing true hemophilia.

(b). Idiopathic—which is to say up to the present, without known cause. This paper deals with this latter type under the generic term, "Hemorrhagic Diseases of the New-Born" as first suggested by Townsend.²

Frequency. The frequency of the disease varies within wide limits according to different observers: Winkel⁶, Gerhardt⁷, Ribemont⁸ report one case of hemorrhage in each 5,000 births, while Orlowsky⁹ found the rate 1 to 116 births. This discrepancy arises from the fact that early observers took note only of the cases presenting signs of external bleeding, and overlooked those with internal hemorrhages only. Later writers from closer pathological studies find death in the new-born due to internal hemorrhages often when

entirely unsuspected. From our experience in the New-Born Clinic at the University of Minnesota, with blood studies and careful autopsy control, we would say the incidence of hemorrhagic disease is 1 case in each 100 births. At any rate, the frequency is much greater than one would be led to believe from reports found in the literature.

Symptomatology. The symptoms depend largely on the extent and site of the bleeding. The onset is within the first eight or ten days, most frequently on the second or third day. There are usually no striking premonitory symptoms, restlessness and pallor first calling attention to the infant. The temperature is usually normal, though there may be temporary elevation. It becomes subnormal after an extensive hemorrhage. Presently may be noted the discharge of blood externally, emesis of blood and tarry stools (true melena), bleeding from mouth, nose, umbilicus, urinary tract, skin, or a rapidly growing cephal-hematoma. Under these conditions, he who runs may read. However, the hemorrhage may be obscure, and external bleeding may occur very late or fail entirely. There may be dyspnea with hemorrhages into the lungs, pericardium or pleural spaces—collapse, resulting from hemorrhages into the liver, adrenals or abdominal cavity,—marked disturbances of respiratory and cardiac rhythm, and vasomotor symptoms from the pressure of blood over the base of the brain,—convulsions from a blood clot over the cerebral cortex. In fact, no more complex pictures of disease are found in medicine than in this malady.

Etiology. It is a well known clinical fact that certain types of infections, such as streptococcic septicemia, produce tendencies to hemorrhages. The new-born offers no exception to the rule. This agrees with the observation of epidemic hemorrhages in new-born wards accompanying puerperal infections as observed by earlier writers. The same cause was operative in Buhl's disease, and Winkel's syndrome which, thanks to better obstetrics, have passed out of our experience. Doubtless some cases of bacterial infections still occur and produce hemorrhages. But later studies show that much of the bacteriological theory is untenable. These cases show little or no elevation of temperature, no other signs of septicemia, and once the bleeding is controlled, there is immediate recovery except for

slight anemia. Lambert's¹⁰ case of a classical and very severe hemorrhage showed instant recovery as a result of direct transfusion of the father's blood. Lues may operate as a cause in certain cases, as also the very rare gastric and duodenal ulcers. Likewise certain degenerative changes in the liver, as in congenital familial icterus, and phosphorous poisoning, produce hemorrhages. However, all the conditions produce actual pathology demonstrable at autopsy, and the hemorrhages may be considered secondary or symptomatic. On the other hand in true hemorrhagic disease no pathological changes have been demonstrated except the uncontrolled tendency to bleed. Observation of unusual congenital lesion, as patent ductus arteriosus, and heart lesions, we now know to be no factors and even compatible with life. Cerebral hemorrhage has been given as a cause, whereas we now know it to be rather a manifestation or symptom of hemorrhagic disease.

According to our present light, it appears that the latest theory as to the cause of hemorrhagic disease is the most tenable, namely changes in the blood or blood vessels. Further, I believe that the latter factor can be discarded. No gross nor microscopic changes have ever been demonstrated in the vessels. If the ultimate cause of hemorrhage resided in the vessel wall, it is difficult to understand results such as Lambert's¹⁰ obtained by transfusion of blood. One would rather anticipate that the blood introduced would continue to escape from the vessels.

Bowditch,¹¹ and Minot¹² and other early observers had noted the thin watery condition of the blood, its failure to coagulate normally and the futility of local measures in checking its flow. Schwarz and Ottenberg,¹³ and Lucas¹⁴ have observed impaired coagulation of the blood in this condition which they believe is due to a deficiency of some coagulating producing substance, or excess of the anticlotting factor. If this is true, injection of normal blood or blood serum should overcome the disease. This has been demonstrated by various measures: Lambert¹⁰ obtained striking results by transfusion, Welch¹⁵ employed human blood serum with gratifying results, Leary¹⁶ obtained help from the use of animal sera. The injection of whole blood subcutaneously by Schloss and Commisky⁵ proved efficacious.

I believe the cause of hemorrhagic disease in

the new-born is some physical or chemical change in the blood which produces delay and impairment in its coagulation properties—that the most constant findings in this disease are a delayed coagulation time and a protracted bleeding time. Further, these findings may antedate any symptoms by hours or days even. These changes may be the only signs of hemorrhage, external bleeding failing in many cases. Some conflicting results have been reported, which I believe are due to varying and unwieldy methods employed in performing coagulation tests and a lack of knowledge of the normal new-born coagulation and bleeding times.

Studies¹⁷ of the new-born blood were undertaken in searching for an explanation of the very frequent finding of cerebral hemorrhage following normal deliveries where traumatic factors failed, and where bleeding was often multiple. A number of these cases showed delayed coagulation and delayed bleeding times. The results of the study were published in the *Journal A. M. A.*, August 14, 1920.

The method¹⁸ of determining the coagulation time which I employed is described in the *American Journal of Diseases of Children*, April, 1920. It is very simple, capable of employment under the most primitive conditions. Briefly, it consists of collecting a freely flowing drop of blood in a clean watch glass, containing a clean No. 6 lead shot. The end point of coagulation occurs when the shot is caught up in the fibrin and no longer rolls. The bleeding time was obtained by Duke's¹⁹ method. Our results in many hundreds of determinations on several hundred new-borns show the normal coagulation time ranges from five to nine minutes; the bleeding time from two to five minutes. In cases of hemorrhagic disease with varied symptoms such as cerebral hemorrhages, hematuria, melena, and multiple hemorrhages, we have found the time delayed many minutes, and in some cases hours.

Mortality. With the older treatment of drug administration, and the employment of styptics and local measures, the mortality was high. In cases of umbilical hemorrhage, Fürth¹⁹ reported a mortality of 100 per cent. Lequeux³ in his monograph observed a mortality of 87 per cent. Numerous statistics vary from 32 to 100 per cent. With newer methods of treatment, this rate has been lowered very greatly. We have, however, no extensive tabulation from which to

quote percentages. A very great factor in treatment is the duration of the disease—the earlier blood therapy is employed, the greater is the percentage of recoveries.

Treatment. In the treatment, we have employed blood by direct transfusion, injection into the superior longitudinal sinus, and subcutaneously. The two former methods are difficult, but best if there has been a great loss of blood. But if the hemorrhagic condition is recognized early, subcutaneous injection has proven entirely satisfactory. The technique requires a healthy donor, from whom blood to the amount of 30 C. C. is obtained by venipuncture, and this immediately injected under the infant's skin. For this method, blood grouping is not necessary. The injection is repeated every six to twelve hours until the bleeding is checked or the blood studies give normal findings. In our cases, we have succeeded in getting the bleeding and coagulation times down to the normal range.

CONCLUSIONS

1. Hemorrhagic disease of the new-born is of frequent occurrence.
2. The disease depends upon changes in the blood which produce a delayed coagulation time and a prolonged bleeding time.
3. We have a simple method for determining these factors.
4. Hemorrhages may be concealed; blood studies may give a clue to diagnosis earlier than other symptoms.
5. Blood therapy by subcutaneous injection is a simple and effective treatment, if employed early.
6. The coagulation and bleeding times should be determined in all new-borns presenting any symptoms.

BIBLIOGRAPHY.

1. Warwick: Cerebral Hemorrhage of the New-Born. *Am. J. M. Science*, 158-95, July, 1919.
2. Townsend, C. W.: The Hemorrhagic Disease of the New-Born. *Archives of Pediatrics*, Vol. 11, 1934, p. 559.
3. Lequex: Etologie et pathogenie des hemorrhagies du nouveau-ne, Paris Thesis, 1906.
4. Gärtner: Indentischer Bacterienbefund bei zwei Melanchallen Neugeborenen. *Archiv. of Gynäk.*, Vol. 45, 1894, p. 272.
5. Schloss, O. M., and Commiskey, J. J.: Spontaneous Hemorrhage in the New-Born. *Am. J. of Dis. of Children*, Vol. 1, p. 276, 1911.
6. 7-8-9. Quoted by Lequex, see note 2.
10. Lambert, S. W.: Melena Neonatorum with Report of a Case Cured by Transfusion. *Medical Record*, Vol. 73, No. 22, p. 885, 1908.
11. Bowditch: On Hemorrhage from the Umbilicus in New-Born Children, with Cases. *Am. Jour. Med. Sci.*, Vol. 19, 1850, p. 63.
12. Minot: On Hemorrhage from the Umbilicus in New-Born Infants. *Am. Jour. Med. Sci.*, Vol. 24, p. 310, 1852.
13. Schwartz and Ottenberg: The Hemorrhagic Disease of the New-Born with Special Reference to Blood Coagulation and Serum Treatment. *Am. Jour. Med. Sci.*, Vol. 140, p. 17, 1910.
14. Lucas: Recent Experimental Work on Hemorrhagic Conditions. *Boston Med. and Surg. Jour.*, Vol. 161, p. 731, 1909.
15. Welch: Normal Human Blood Serum as a Curative Agent in Hemophilia Neonatorum. *Am. Jour. Med. Sci.*, Vol. 139, 800, 1910.
16. Leary: The Use of Fresh Animal Sera in Hemorrhagic Conditions. *Boston Med. & Surg. Jour.*, Vol. 159, No. 3, p. 73, 1908.
17. Rodda: The Coagulation Time of the Blood in the New-Born with Especial Reference to Cerebral Hemorrhage. *J. A. M. A.*, Vol. 75, 452, 1920.
18. Rodda: Studies with a New Method for Determining the Coagulation Time of the Blood in the New-Born. *Am. Jour. of Disease of Children*, Vol. 19, 269, 1920.
19. Fürth: Die Nabelblutung. *Archiv. f. Kinderh.*, 305, 1884.
20. Duke: The Relation of Blood Platelets to Hemorrhagic Disease. *Jour. A. M. A.*, Vol. 55, p. 1185, 1910.

A NATURAL FACTOR FOR ESTIMATING THE TOTAL SOLIDS IN SPECIMENS OF URINE AND THE RELATIVELY NORMAL AMOUNTS OF THE INDIVIDUAL CONSTITUENTS.*

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CHICAGO

Among the objects of a urinalysis, is the determination of the amounts of the various dissolved solids, normal and pathological.

The total solids affect the specific gravity of the specimen, the density being greater when a larger amount of solids is dissolved in a given volume of urine.

A large series of examinations, by us, has shown that the normal specific gravity of a urine, voided by an "average" individual (65 kilos or 165 lbs. weight) with American habits of diet, is 1.022 at 15 degrees Centigrade. Such a urine will measure 1320 c.c. for a 24 hour elimination and contain 5.00 per cent dissolved solids.

When a larger than usual quantity of fluid is imbibed, there is an equivalent increase in the volume of urine voided and, other items remaining the same, the effect is that of simple dilution, the same as though the water were added to the urine after voiding. The dilute urine, therefore, contains the same total amount of solids in the day's output as the normal one, but in less concentrated form. That a given quantity of such urine contains less than the standard quantity of solids, is made manifest by the diminished specific gravity.

The percentage of dissolved solids in any urine can be determined by measuring out a definite

*From the Research Department of The Fischer Laboratories, Inc., 25 E. Washington Street.

quantity, say, 100 c.c., into a previously weighed evaporating dish, driving off the water by evaporation and weighing the dish with its residue. From this weight, the original weight of the dish is subtracted, giving the weight of the solid residue, which can then be calculated to the percentage. This is a tedious process and for the amount and value of the information derived, is not worth the time and trouble required.

To simplify the determination, use is made of the value obtained for the specific gravity. The variations in the specific gravity involve the last two figures and it has been found that when these are multiplied by a factor, a number is obtained which approximates the amount of solids per liter very closely.

Several such factors have been proposed, the most popular being that of Haeser, who multiplies the last two figures of the specific gravity by 2.33, which gives the grams of total solids per liter, and when divided by 10, the grams per 100 c.c., or percentage. We have found this to be the most accurate of such coefficients, but, it must be remembered, that all the factors heretofore proposed are artificial, and the results obtained by their use only approximate. With this coefficient, for instance, the total solids in a urine with a specific gravity of 1.022 calculate to 5.126 per cent, whereas, as stated above, we consider 5.00 per cent the normal amount for this density, the actual value obtained in our determinations being 5.032 per cent.

Other factors are that of Long, who uses the figures 2.6 in the same way, that of Haines, who uses the figures 1.1 and thereby determines the grains of solid per fluid ounce, that of Bird, who considers the last two figures to represent the grains per fluid ounce, whereas Todd states that the "Total solids may be determined roughly, but sufficiently accurate for clinical purposes, by multiplying the last two figures of the specific gravity by the number of ounces voided in 24 hours and to the product adding one-tenth of itself. This gives the amount in grains." Trapp is satisfied with multiplying merely by 2, and Vierodt ambitiously multiplies by 2.2337.

Although Haeser's coefficient gives results that are quite near the correct value, the benefit derived by its employment is limited, in that it takes care of the total solids, only, and gives no information regarding any particular constitu-

ent. In fact, it has been emphasized, by no less an authority than Purdy, that "No definite deductions are to be drawn, from the quantity of solids present, as to the relative amount of any special product," and "the amount of urea, nitrogen, or other constituent, if sought, can only be determined by special quantitative methods."

The foregoing is true, in so far as that no calculation of the quantity of the various ingredients should take the place of their determination by accurate methods of analysis, but, as dilution or concentration of the specimen affects all the constituents proportionately, a closer consideration of the specific gravity with this in mind, will enable us to judge whether the findings in an analysis are normal for the specimen, or represent pathological variations.

To enable us to derive such benefits from our results, we have devised a factor which we call the "Relative Concentration" of the specimen and which we consider the most logical, easiest calculated and most useful one of which we know.

As the specific gravity varies proportionately with the dissolved solids, a specimen having a specific gravity of 1.011 will contain only one-half as much total solids as one with the normal specific gravity of 1.022. The relative quantity of dissolved solids can, therefore, be determined by *dividing the last two figures of the FOUND specific gravity, by the last two figures of the NORMAL specific gravity. This is the "RELATIVE CONCENTRATION" of the specimen.*

It follows that if the total solids are reduced to one-half because of the dilution, each constituent will be reduced in the same proportion, e. g., the chlorides, which, in a normally concentrated urine are present to 10.00 per cent by volume, according to Purdy's centrifugal method (corresponding to 1.) per cent NaCl or 0.79 per cent Cl, as determined by the various gravimetric or volumetric methods of analysis) in a urine the relative concentration of which is only 0.5, will also be 0.5 of the normal, or 5.00 per cent by volume (or 0.65 per cent NaCl, or 0.395 per cent Cl).

It is necessary merely to multiply the normal percentage by the relative concentration to obtain the per cent which is *normal for the particular specimen*. Comparison of this value with the result of the analysis will tell us whether we

are dealing with an otherwise physiological specimen or a pathological one.

In the same way this factor can be used for all the other urinary constituents—if the normal content for a normal urine is known, the correct content for the particular specimen is easily determined.

A study of a number of thousand normal specimens has shown us that the normal urea content of a properly concentrated urine is 2.2 per cent. One of the popular textbooks on Clinical Diagnosis states, in its division on urinary analysis, that "The writer has been struck with the usual close relationship of the percentage of urea to the specific gravity. In watching this point in over 2,000 examinations of urine within the last year, the writer has observed that the percentage of urea will practically parallel the last two figures of the specific gravity; in other words, a specific gravity of 1.015, for instance, will normally be associated with a urea content of 1.5 per cent." Although the writer of that work was evidently unaware of the fact, these coincidences are good examples of variations due to variations of the relative concentration. A urine having a specific gravity of 1.015 has a relative concentration of 0.681, plus $(15 \div 22)$ and this, when multiplied by the normal percentage of urea, 2.2 per cent (note that in this case the figures are the same) gives us 1.5 per cent. If the specific gravity of the urine were 1.011, with a relative concentration of 0.5 $(11 \div 22)$, the correct urea percentage for the specimen would be 0.5×2.2 , or, 1.1 per cent, whereas a specific gravity of 1.026 with a relative concentration of $26 \div 22$, or 1.18, plus, calculates to 2.596, if the calculation of the concentration has been carried out to the second decimal place only, and, lastly, a specimen with a specific gravity of 1.030 and a relative concentration of 1.361, has a calculated urea percentage (the relative concentration having been carried out to the third decimal place) of 2.9942 per cent.

As a further example, we might note that our investigations have shown that a normal urine will contain 0.045 percent uric acid. A urine with a specific gravity of 1.027 will have a relative concentration of 1.227 $(27 \div 22)$ and its proper uric acid content would be 0.055 per cent. Such a figure, not considered with reference to the relative concentration would be likely to give

rise to the opinion that the uric acid content of the specimen was excessive, whereas our simple calculation shows us that it is absolutely correct.

In diabetes mellitus, the urine has a high specific gravity from the sugar present. Obviously, in this condition, the relative concentration, if calculated from the specific gravity, would not give us a proper basis from which to consider the other contents. Although there is an excess of urea eliminated in the average case of this disease, we have, however, found it useful to take the percentage of urea found as a basis for calculating the relative concentration and thus get some idea of the variations in the other constituents.

In diabetes insipidus, we have an exceedingly low concentration. In conditions where the concentration is low because of simple increased inhibition, it can be brought to normal by restriction of the fluids. Furthermore, in simple dilution of the urine, the relative concentration of the various constituents is normal, but in diabetes insipidus, in spite of the low percentage of urea, chlorides, sulphates and phosphates, their relative concentration is excessive, and restriction of the fluid intake leaves the findings as they were, instead of bringing about a further increase in concentration. The solids which would have been eliminated with the additional water that would have been imbibed had there been no restriction of intake, are retained within the body, giving rise to symptoms due to their retention.

In acute nephritis, the relative concentration of the total solids is increased because of the deficient fluid elimination, the relative concentration of the individual ingredients varying according to the degree of pathology.

We claim for our factor (1) That it is a natural one, not a forced one; (2) that it enables us to determine, easily and accurately, what the total solids of the specimen should be (provided sugar is absent); (3) that it gives us a basis for determining the normal percentage of any urinary ingredient for any sugar free urine, and (4) that it gives us a basis for comparing the percentages found with what they should be for the specimen; (5) that it gives us a basis for judging the degree of pathology by noting the variations of the individual constituents.

FOREIGN BODIES IN THE BRAIN*

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Living cases of foreign bodies in the brain are so infrequent that the author feels that such

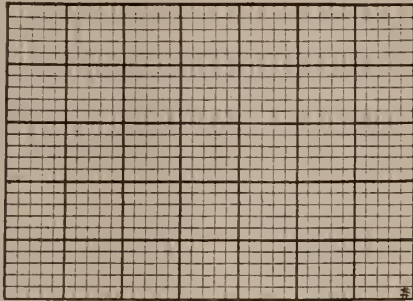


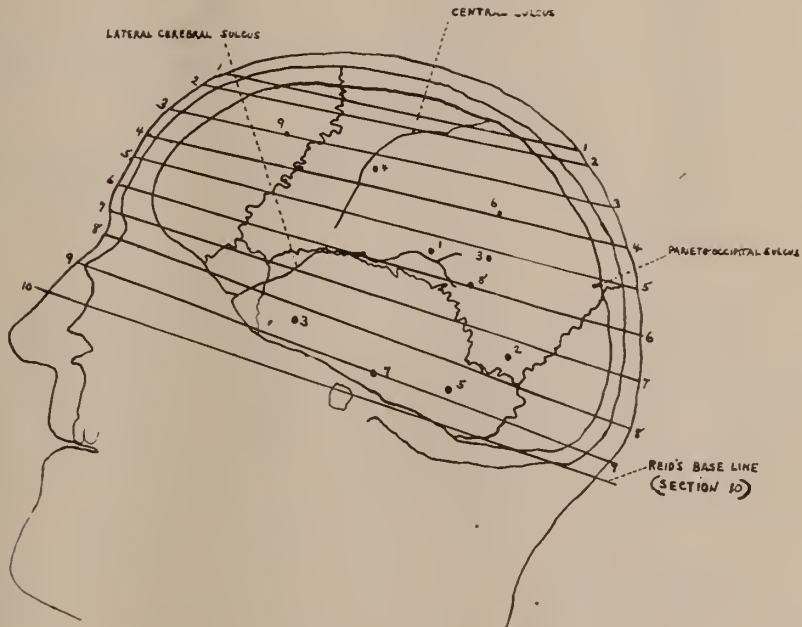
Fig. 1. Square Centimeter Scale for Eyclesheimer & Shoemaker "Cross-Section" Anatomy."

cases that passed through our large military hospitals during the late war should not go unreported. The medical literature is scant on

U. S. A. General Hospital No. 28, Ft. Sheridan, Ill., from the time of its opening as a general hospital in the late Fall of 1918 until the early Fall of 1919, when the author was discharged. The author has been able to follow up eleven of these cases and it now averages a little more than 1½ years since these patients received their trauma.

Before proceeding with a history of the individual cases, a few words as to the roentgen method used to localize the foreign bodies might prove interesting.

Due to the great density of the skull, fluoroscopic localization methods to determine the depth of small foreign bodies is frequently difficult. Although the author has used the Strohl method and the simple tube-shift, fluoroscopic method, in some of the cases, more satisfactory results were obtained with the old tube-shift plate method. With this method lateral and postero-anterior plates were first made and then the foreign body located under the fluoroscope, a mark being placed upon both sides of the



KEY FIGURE 2

Fig. 2. Showing the location of the foreign bodies in lateral view of the skull. The number of the case is marked at the site of the foreign body and the plane in which it lies as shown in the "cross-section anatomy" is illustrated by the transverse lines which are numbered and called sections.

the end results of groups of such patients who have been observed for many months after the initial trauma. Twelve such cases passed through

head opposite the foreign body. In each case the foreign body was located from both sides of the head, and, of course, was located in the central ray. Following this, the diameter of the head opposite the foreign body was obtained

*Read before the 70th Annual Meeting of the Illinois State Medical Society at Rockford, May 18, 1920.

by means of calipers. Then the depth of the foreign body was determined by the tube-shift plate method, great care being taken to have the part of the head which was marked as being opposite the foreign body in contact with the plate. Since the depth of the foreign body was localized from both sides of the head, and the diameter of that portion of the head had already been determined, it was easy to have an accurate check as to the correctness of the localization findings.

Having already obtained the depth of the foreign body beneath the skin, and wishing to

lower margin of orbit to center of the external acoustic meatus). This corresponds to a similar line, known as Section 10 of the atlas. A line is then drawn on the teleoroentgenogram, perpendicular to Reid's base line, passing through the foreign body. The distance this perpendicular line extends from the line representing Reid's base line to the foreign body is measured. Also, the distance on Reid's base line between the external acoustic meatus and where the perpendicular line begins is measured. Having obtained these measurements, they are compared with similar measurements on Key-figure 2 of

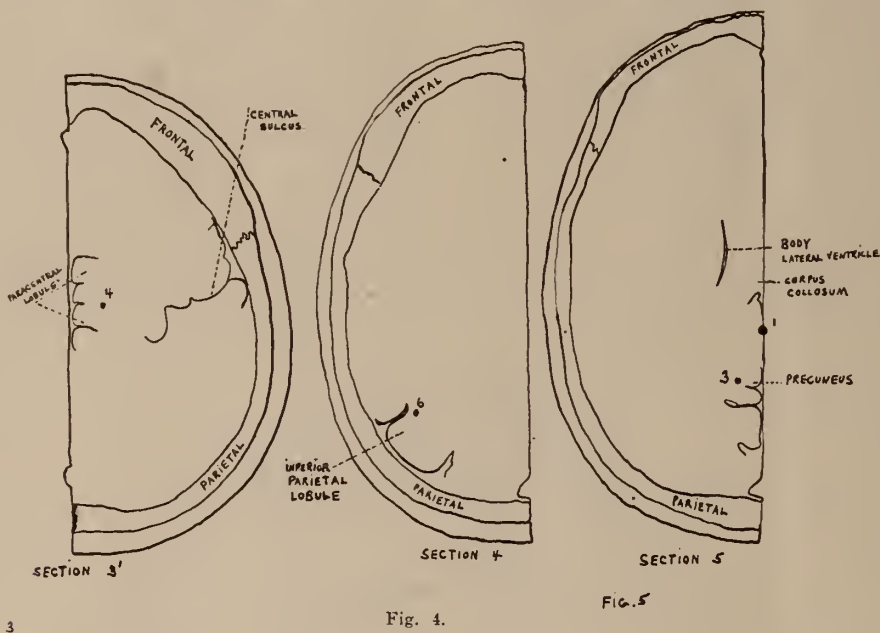


Fig. 4.

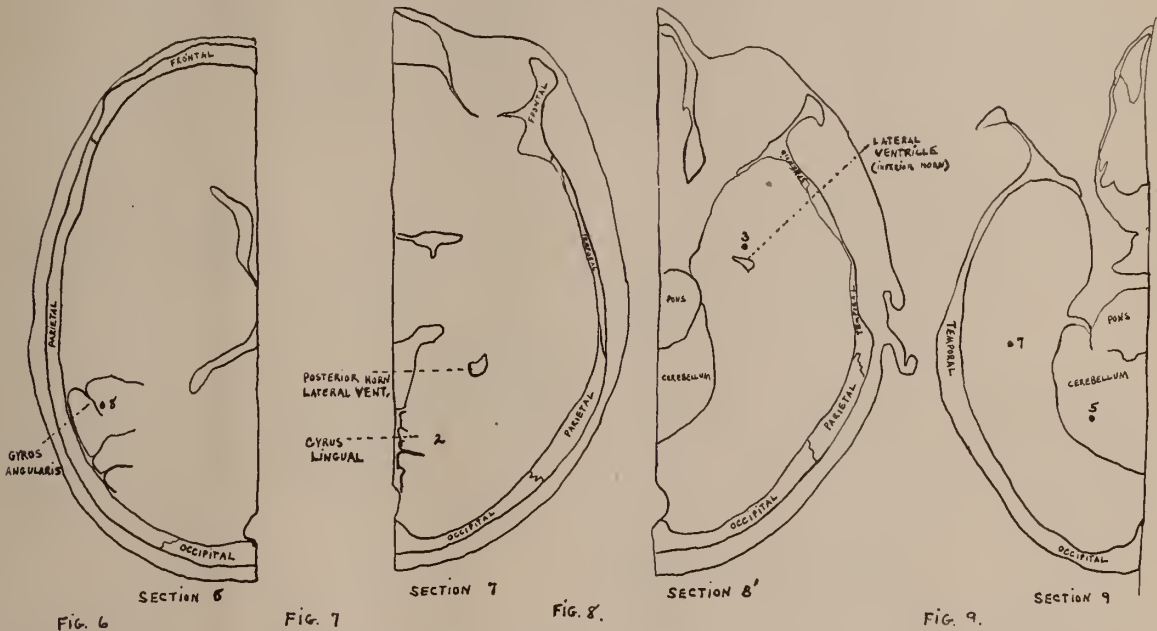
ascertain its anatomical location, the following method was pursued. The postero-anterior and lateral diameters of the head having been obtained with calipers, a teleoroentgenogram of the head (tube plate distance 6 to 7 feet) was then made, the side of the head containing the foreign body being nearest the plate. Such a plate shows a minimum amount of distortion, the head appearing approximately normal in size if the 7-foot distance is selected. The anatomical localization is then completed by a comparative study with the sections in the "Eycleshymer-Shoemaker Cross-Section Anatomy." In this atlas all the head sections are shown as $\frac{4}{5}$ the natural size. Key-figure 2 of the atlas contains a lateral view of the head which compares very favorably with a teleoroentgenogram of this part. A line is then drawn on the teleoroentgenogram to represent Reid's base line (from the

the Cross-Section Anatomy, but since these sections are only $\frac{4}{5}$ the natural size, a proportionate reduction must be made. This is entirely overcome by drawing a scale on an X-ray film and then fixing it without developing. This gives a transparent celluloid scale that is very convenient. The scale is so drawn that each square is 8 mm. in size. One such square corresponding to a square centimeter. Having obtained the location of the foreign body on Key-figure 2 of the Cross-Section Anatomy, and noting the distance it is on this figure from either the anterior or posterior extremity of the head, (which, of course, will be in the median plane), we now turn to that plate of the atlas which shows a transverse section of the head at that particular level.

We already know the distance the foreign body is from either the anterior or posterior ex-

tremity of the head at the level of the median plane. This distance is then measured off on the section. The foreign body then lies in a plane at right angles to this and we merely

In order not to burden the reader with a long description of each individual case examined, a table is appended which gives the interesting facts pertaining to each case.



measure off its depth beneath the skin surface at this level, and this gives its approximate anatomical location.

Conclusion: Three of the eleven cases have died. Four of the cases have been operated upon and the foreign bodies removed. Three

Case Number	1	2	3	4	5
Age	22	28	28	24	21
Lobe of Brain Involved		Rt. Occipital Lobe.	1. Rt. Parietal Lobe. 2. Rt. Temporal Lobe.	Left Frontal Lobe	Rt. Cerebellum.
Part of Lobe Involved	Corpus Callosum (splenium).	Lingual gyrus.	1. Praecunus. 2. Anterior part	Paracentral lobule.	Superior semilunar lobule.
Function of Brain Involved	Commissural fibers which connect opposite sides of cerebrum.	Visual receptive center.	1. Psychic common sensory; center of stereognosis. 2. Center of intonation.	Emissive and psychic motor and receptive and psychic common sensory to feet.	General function of cerebellum.
Size of Foreign Body	1x3/4x1/2 cm.	1x1/2x1/4 cm.	1. 1x1x1/2 cm. 2. 3/4x1/4x1/4 cm.	1 1/2x3/4x3/4 cm.	1x1/2x1/4 cm.
Depth from Surface	8 cm.	5.2 cm.	1. 6.6 cm. 2. 5.2 cm.	6.6 cm.	5.2 cm.
Date of Injury	2-22-18	9-28-18	10-5-18	10-5-18	9-17-18
Date of Last Report	3-15-20	4-12-20	4-19-20		4-27-20
Condition at Last Report				Patient died 5-9-20; 3 days after removal of F. B. from meningitis.	
Epileptic Attacks	Two in past 10 months.	None.	Once a month (light).		Two severe attacks in past 6 months.
Paralysis	None.	Mild Right hemiplegia.	Left Arm.		Paresis at times in right side.
Headache and Vertigo	Vertigo at times.	Frequently.	None.		Frequently.
Paraesthesia	None.	In right extremities.	None.		In right extremities.
General Health	Very good; working daily.	Not Good.	Fair.		Fair.
Remarks	Had first Jacksonian seizure 15 months after injury.	Has great pains in head at times; F. B. passed from one side to other.	Cannot stand excitement, tires easily.	Had right hemiplegia with numerous convulsions.	Foreign body passed through foramen magnum?

died on the third, fourth and eighth days respectively following the operation, as a result of meningitis, making an operative mortality of 75 per cent. Of the eight living cases, seven still have foreign bodies in the brain and five of these have Jacksonian epileptic attacks. Of the two who are not so affected, one complains of great pains in his head at times and in the

than the Jacksonian epilepsy. In other words as far as we are able to ascertain, the functions of that portion of the brain in which the foreign body is located is not much disturbed as a result of its presence. The symptoms complained of are those in general which practically all such patients have. The special symptoms are due to the traumatized portion of the brain through

Case Number.....	6	7	8	9	10	11
Age.....	28	22	23	27	28	28
Lobe of Brain Involved.....	Left Parietal Lobe.	Left Temporal Lobe.	Rt. Parietal Lobe.	Rt. Frontal Lobe.	Not definitely localized.	Not definitely localized.
Part of Lobe Involved.....	Inferior parietal lobule.	Inferior temporal gyrus.	Angular gyrus.	Medial frontal gyrus?		
Function of Brain Involved.....	Psychic common sensory.	Naming center (Mills).	Psychic common sensory and probable also psychic optic center.			
Size of Foreign Body.....	1½x1¼x¼ cm.	1½x1¼x1¼ cm.	1½x1½x½ cm.	2x2x1 M.M.	1 M.M.	
Depth from Surface.....	2.7 cm.	3 cm.	2.2 cm.	2.5 cm. (about)		
Date of Injury.....	11-1-18	7-22-18	10-22-18	11-4-18	11-6-18	7-4-18
Date of Last Report.....			3-13-20	3-17-20	4-5-20	3-14-20
Condition at Last Report.....	Patient died 7-19-20; 8 days after removal of foreign body.	Patient died 4-28-20; 4 days after removal of foreign body, from meningitis.				
Epileptic Attacks.....			None.	Two in last year.	None.	Twice a month.
Paralysis.....			None.			None.
Headache and Vertigo.....			Occasional Vertigo.	Headaches and occasional vertigo.	Occasional Vertigo and headaches.	Occasional.
Paraesthesia.....			In left leg.	In left hand.	Occasionally on left side.	In hands.
General Health.....			Good.	Good.	Fair.	Poor.
Remarks.....	Had convulsions for which operation was decided upon; F.B. passed from one side to other.		Operated upon 3-26-19 and F. B. removed.			

other case the foreign body is extremely small in size—the smallest in the series. Inasmuch as the first Jacksonian convulsion did not occur in one of the case until 15 months after the injury, these men may yet develop this condition, as it has been but 16 and 19 months respectively since they were injured. The one patient who lived following the removal of the foreign body has had no convulsions. All the cases except one complain of headaches or vertigo, usually the latter. About half of the cases have paraesthesia at times in the formerly paralyzed parts, although the paralysis itself has disappeared in most of the cases. The general health of most of the patients is fairly good.

In no case does the foreign body appear to be causing any special symptom or symptoms, because of its particular anatomical location, other

which the foreign body has passed to reach its final resting place, although the Jacksonian epilepsy appears to be due to the presence of the foreign body itself. In some cases, depending upon the composition of the foreign body, fine metallic dust can be traced from the point of entrance into the skull to the foreign body. It might also be interesting to note that in all the cases reported, except two, the men stated that as far as they recalled, they had their helmets on at the time of injury and that the foreign body evidently passed through same.

It appears to me, in view of the very large percentage of cases developing Jacksonian attacks, that every former soldier in our army who received a foreign body in his brain during the past war should be given liberal compensation. There is no certainty what may happen to the

foreign body or what symptoms may develop. A man who may have a Jacksonian convulsion at any time is greatly handicapped in the pursuit of many occupations. The high operative mortality forbids surgical approach to remove the foreign body, especially if it be deeply situated. That many medical officers in our army did not appreciate the seriousness of foreign bodies in the brain is evident by the small percentage of disability that was recommended by the S. C. D. Boards for some of these men when they were discharged. I know of one case where 20 per cent was recommended and in another 25 per cent. One of these cases is now having monthly Jacksonian attacks. This is certainly a serious injustice to men who have suffered from one of the most severe injuries they can receive and yet live and who are prone to suffer and be handicapped for the rest of their life as a result of it.

HYSTERECTOMY*

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Indication, diagnosis, pathology (gross and clinical), our advice to our patients, operation, results and abuses.

Hysterectomy is the surgical term applied to the operation for the removal of the uterus. In presenting a paper on this subject and upon looking up the literature, we are impressed by the scope of work covered by this term. We will endeavor however to condense a few of the more important and everyday facts and problems into this paper and will present to you some of the most direct conditions leading to hysterectomy and give a practical working diagnosis of these conditions, leaving the voluminous details to the many good reference books at our disposal.

Indications: Hysterectomies are resorted to in the radical cure for fibroids, carcinomas, sarcomas, chorion-epitheliomas, sub-involutions, prolapsus uteri, persistent and troublesome displacements, debilitating and irretractible metrorrhagia and sepsis, acute and chronic.

Diagnosis: Diagnosis should be at all times governed by a thoroughly sectioned specimen but the operative procedure to be followed should be tempered with the judgment and experience of

the surgeon. Many times clinical and gross appearances overrule a negative microscopical report.

Early diagnosis of carcinoma of the cervix is most important, due to its anatomical relations to the uterus, rectum, bladder, and large vessels. Radical operation is attended by difficulties and grave danger in advanced cases. Considering the fact that practically all cancers of the cervix are preceded by cervicitis, or erosions, should make us more careful in adjudging these conditions simple and inconsequential until clinical signs are so pronounced that we cannot further ignore them.

On the other hand, we should not jump at conclusions of malignancy; neither should we be too free in the expression of our suspicions to the patients as a great deal of harm is sometimes done by instilling the idea of cancer into their minds and also placing ourselves in an embarrassing position by statements we cannot bear out.

My plan and suggestion is to be reasonably sure first. The method I use is simple and has given 100 per cent satisfaction to date. In all cases of inflammation of the cervix that has resisted the ordinary methods of treatment or that are suspicious in character, I apply a 10 per cent solution of copper sulphate to the erosion (Hutzman). If it is innocent, a bluish color appears and bleeding stops; if it is cancerous, it causes it to bleed. This is applied every three to four days and results noted. If one spot persists in bleeding, then a section is taken and sent to the laboratory. For doing this, I would advise a hypodermic injection of 2 per cent apothesine into the cervical tissue and a pair of hooked or double eaglebeak seissors be used to prevent their slipping off the firm cervical tissue. A wedge-shaped piece being taken, the incision should be touched with iodine or a little carbolic acid; if hemorrhage persists, apply a little pledget of cotton moistened with adrenalin solution, silver nitrate full strength or a catgut suture.

A few of the more common conditions causing erosions of the cervix and which must be differentiated are: Chancre, chancroids, irritating discharges, pessaries, irritating douches, T. B., and carcinoma. Indurations must also be differentiated and are usually due to: Cysts, fibroids, or scar-tissues from lacerations.

*Read before the Aux Plaines Branch Chicago Medical Society, Sept. 24, 1920.

Pathology: Ninety-five to 98 per cent of cervical cancers are of the squamous cell variety; the others are columnar. Gross appearance is that of an ulcer, erosion or induration. Early clinical symptoms are negative except slight blood streaked leukorrhea; later, pain and foul smelling discharge and continuous bleeding.

Corpus Uteri: In dealing with the body of the uterus, we have more complications and obscure conditions to reckon with as the tests that are so easily applied in cervical conditions are not possible in the body of the uterus. Also, we have many more conditions to differentiate. Each is similar in its manifestations. We will consider them under these headings: Menorrhagia, Metrorrhagia, Amenorrhea.

Menorrhagia: This is an excessive flow or prolongation of the regular menstrual period and may be caused by endometritis, submucous fibroids, sub-involutions, uterine congestions, retroversions, and retroflexions, prolapsis, cirrhosis of the liver, emphysema of the lungs, uncompensated valvular disease of the heart, passive congestions due to constipation, tight lacing, high blood pressure, arterial sclerosis, excessive coitus and strong douches. Temporary menorrhagia may be caused by violent emotion, athletics, fright, measles, diphtheria, influenza, scarlet fever, cholera, hemophilia, purpura and deficiency in calcium salts.

Metrorrhagia: This is loss of blood between menstrual periods and may be due to carcinoma, sarcoma, epithelioma, sub-mucous fibroids, fibroid polypus, mucous polypus, endometritis, T.B., cervical erosion, menopause, deficiency in calcium salts, leukemia, hemophilia, scorbutus and intercourse.

Amenorrhea: This is the absence of the menstrual flow and may be due to anemia, chlorosis, leukocythemia, T.B., malignant growths, diabetes, colds and shocks before menstruation.

It may readily be seen that disturbance of the uterine functions are not always due to local conditions but may be physical or constitutional derangements.

Our Advice to Our Patients: A patient presents herself to us for diagnosis and advice, assuming she knows she has a fibroid; also, she knows if it doesn't get worse than it is at present, she will live fairly comfortably. It is easy to tell the patient that there is no im-

mediate danger, "just wait." That is usually pleasing to the patient and your statement is literally true, but when complications set in, that cause the patient's death or makes the operation a real hazardous one, then we doubt the wisdom of our advice to wait. We may be conscientious in our advice, we may treat the patient and the insidiousness of the growth may cause the treatment to appear to be doing the patient good, but usually the patient passes on to other hands and then others and eventually reaches the stage where operation is undoubtedly necessary to save her life. She then gets what she should have had years ago. We thought we had treated her seemingly successfully, not knowing the final results, having formed an idea that our treatment was successful and that our advice to wait was proper and scientific. In so doing, we have formed an erroneous idea which will be practiced upon those that follow. We have done an injustice to this patient and only the man at the end of the line will have gained any useful knowledge, and at that stage the patient's condition may be so advanced that operation is impossible or the risk greatly increased with the results not so satisfactory as had we operated instead of treating.

The idea that fibroids do not cause death is erroneous and let us get that out of our heads and give room for more useful ideas. Our experience shows and literature confirms that many cases of death are due directly to fibroids not operated on. On the other hand, deaths have occurred from the operation on fibroids where possibly the patient may have lived comfortably for years or never would have been troubled greatly had the operation not been performed. As a result, we must be reasonably sure that the chance of death from operation is fully justified by the danger of delay in the particular case.

It is easy to advise operation; just as easy and possibly easier to advise waiting. We have no assurance that the trouble will not rapidly increase; in fact, we are taught by experience that they usually do progress. We must tell the patient what her future prospects are, not her present state which she already knows—that she is fairly comfortable and if she gets no worse, she will continue to live; so we must decide on the prognosis of the case.

Due to the low operative mortality, the im-

proved technique along with clinical manifestations, although slight, we are justified in advising removal of the myoma; on the other hand, if small fibroids are found during routine examinations unaccompanied by clinical signs, we are justified in waiting and keeping close watch on their process. Here we may say that radium has given definite results in some cases and that a trial should be given it when possible and where an immediate operation is not indicated. Our duty and advice to patients with malignant growths are clear-cut, usually, but even in these cases the physical condition of the patient must be considered, as many times a life may be saved by preparing the patient for the ordeal. Preparation may be made by rest, little nourishing, etc., with very little danger of extension of growth.

Operation: Our improved technique and our increasing knowledge of this work enables us to get results, relieve suffering, and prolong life and happiness to a very gratifying degree. I would urge that more effort be made to conserve the ovaries during this operation as a great many operative derelicts are made by carelessness in this respect. Also, many uteri have been sacrificed when a myomectomy would have done just as well and saved the patient from the more dangerous and extensive hysterectomy. Homes have been made happier by the advent of children due to this conservative operation and good judgment of the surgeon.

Effect: Operation upon the uterus where a careful diagnosis has been made, including a careful consideration of allied conditions, the proper explanations to the patient, a conservative prognosis and skillful work, will give us the things for which we are striving, to place surgery of these parts on a firm basis of scientific and successful results, eliminating or regulating the guessing and failures to a minimum.

Abuses: Let us not take advantage of these wonderful results and the confidence of the people to do indiscriminate or unnecessary operations, holding out the hope to the sufferer that what this has done for your friend—it will also do for you, while we know that the conditions are unlike and we are taking a long chance with the patient's future health, happiness and confidence in surgery, merely for the pecuniary consideration or the experience of operation. Why should we not use our best methods of de-

termining as far as possible the exact conditions? Why should a surgeon risk his reputation and operate upon the diagnosis and recommendation of the medical attendant without himself having diagnosed the condition? I have seen this done repeatedly and we are reviewing and excusing results of such cases daily.

We have given in some detail, conditions that are manifested through the uterus showing us the many conditions which we are too apt to contribute to the uterus wherein it has nothing whatever to do with the cause. The uterus acts as a relief or safety valve for congestions and disturbances of other organs and in a great many cases, its bleeding serves as a therapeutic agent in these conditions. Here the hysterectomy is resorted to because the patient is easily persuaded, as they readily connect this disturbance with cancer, then, "What Happens?" We not only do not get results but do actual harm. We, of course, stop the manifested condition or hemorrhage and allow the true condition to continue its inroads upon a body made more susceptible by operative interference. In doing this, we give good diagnosis and surgery an awful shock (also our own confidence trembles at little). We pass a dissatisfied patient to some of our brothers, for they usually decide to try someone else when our promises and prophecies do not come true. And we sit back confidently waiting for the results to materialize from an operation where the existing condition was entirely foreign to the apparent manifested condition for which we operated.

CONCLUSIONS

1. Study well the allied conditions and their differentiation pertaining to disturbances of the uterus and uterine functions.

2. In diagnosing, use all available methods and knowledge you possess; then, if there is any doubt, consult another surgeon. Consultation with *good* men will do you good and your patients will think none the less of you if you explain the benefits derived from two opinions (by consultation, I do not mean a dummy or pre-arranged farce but an honest exchange of opinions). Be as sure as possible of your diagnosis before preceding and, as this grows on you, you will rise in your *own* estimation as well as in others.

3. Go deeply into the study of pathology and

the usual course of these conditions and be prepared and looking for the unusual.

You must be familiar with the normal anatomy and physiology before you can know the pathology.

4. Study the functions of the pelvic organs and their far-reaching effects upon the system and try to maintain, as far as possible, that function.

5. Our advice to the patient can only come "conscientiously" after a broad and comprehensive knowledge of the subject in hand.

6. Operation of necessity or selection is governed by a keen knowledge of aforesaid conclusions.

7. The term "Abuses" and the application of its meaning will decrease in direct proportion to the knowledge gained and applied in this field of surgery.

THE OPHTHALMIC USE OF SOME OF THE MORE RECENT THERAPEUTIC PREPARATIONS*

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There is a great deal of hesitancy on the part of many oculists in the use of recently published therapeutic preparations, no matter whether designed for purely ocular use or not. This reticence is admirable from the standpoint of conservatism, but somewhat unfortunate in many cases for the patient as many of the recent drugs have qualities not contained in the old reliables. It is for purpose of urging the use of these newer proven preparations that this paper appears and but one new drug is included in the following list, all of which are manufactured in this country.

Resorcin. This drug has long been used by the Dermatologists and even today forms one of their main therapeutic weapons. But its use in Ophthalmology is comparatively rare. Fully twenty years ago the late Dr. H. Gradle used this in combination with precipitated sulphur in the following prescription:—

Resorcin	0.2
Precipitated Sulphur	0.2
Lanolin	5.0
Vaseline	5.0
M. Salve for external use only.	

This ointment proved very efficacious in the treatment of ulcerative blepharitis. It was given to the patient for home use with the direction to warm a small amount of the ointment on the tip of the finger and apply directly to the ulcerated margins of the lids, which had previously been cleansed by the persistent use of pledgets of cotton moistened in warm boric acid solution. In many cases, the results are extremely gratifying, although the patient must be warned of the intensive smarting that will result should the ointment be applied to the inner surface of the lids.

In 1911, P. Knapp of Basle, advocated the use of resorcin in a two or three per cent. solution in the milder forms of conjunctivitis. A two per cent. solution or

Resorcin	0.6
Aq. Dest.	30.0
M. Eye Drops.	

is about as strong as patients can bear with comfort and even this produces considerable smarting, although the sensation does not persist for more than twenty or thirty seconds. In conjunctivitis due to the Morax-Axenfeld bacillus, in irritation of the conjunctiva from wind or any of the air-born elements of any city, such a lotion is very grateful. Many a patient who enters the office convinced of the necessity of glasses is entirely relieved by the use of two per cent. solution of resorcin, the asthenopic symptoms being of purely conjunctival origin. With time, this solution becomes yellowish and eventually light brown, but this does not affect the efficacy in the slightest and a patient may use the same solution over a long period of time without any untoward effects from the age of the solution or the continued use of the drug.

In conditions of the conjunctiva in which there is a distinct formation of pus, resorcin is of no avail. A rather peculiar action of the drug appears in cases of hordeolum or chalazion. If either of these conditions be present, the use of resorcin seems to increase the severity of the pathological condition, possibly due to the astringent action.

Fluorescin Zinc. This drug is formed by a chemical combination of potassium fluorate and zinc sulphate and is a yellow coarse powder, soluble in water only in one part to a thousand.

*Read before the Sioux Valley Eye & Ear Society, Sioux City, Iowa, Jan. 19, 1921.

When dissolved in normal salt solution, it breaks down into its component parts of potassium fluorate, which is harmless, and zinc sulphate, the latter being in the proportion of eighteen parts in a thousand.

The ophthalmic use of this drug was first described by Wolff of Amsterdam in 1913 and was introduced into this country by the author in 1914. In Morax-Axenfeld conjunctivitis, it is a specific and will cure all but the most persistent cases in one application. It is of no value in the face of a purulent infection, and in follicular conjunctivitis of other the Morax-Axenfeld origin, it is of no greater value than the ordinary remedies. The yellow powder is dusted with a cotton-wound applicator in a rather thick layer on the conjunctiva of the everted lower lid and then rubbed into a smooth paste-like mass. There is an immediate sensation of smarting which soon changes into the feeling of a foreign body. This produces a flow of tears, which in turn dissolves the fluorescein zinc in a one to one thousand solution. With this solution the entire tarsal and bulbar conjunctiva is kept bathed until the last of the drug has been dissolved. This takes from ten to thirty minutes, depending upon the amount of drug dusted onto the conjunctiva and upon the rapidity of the flow of tears. Of course, these tears are colored a yellowish-green which however does not form a permanent stain in linen. If necessary, the application may be repeated after two or three days.

Mercuraphen. This is a sodium-oxymercuro-orthonitrophenolate, containing 33 per cent of mercury and was first described by Shamberg of Philadelphia in 1915. His endeavor was to produce a substitute for the bichloride of mercury, more deadly toward hostile organisms and less toxic for the human organism. He succeeded in so far that mercuraphen has about fifty times the bactericidal powers of bichloride experimentally and is infinitely less toxic. I have been using this preparation since 1916, thanks to the kindness of Dr. Shamberg in supplying samples. It is useful in acute purulent inflammations of the external eye and particularly so in pneumococcic infections, although less potent than the drug next to be described. In 1-15,000 to as high as 1-5,000 solution mercuraphen may be used as an eyebath and is most efficacious when used

in conjunction with one of the colloidal silver salts. In acute purulent infections, it has proven very beneficial to instill a drop of colloidal silver into the conjunctival sac and allow it to remain there about two minutes by making pressure over the lacrymal points with the finger. The continued presence of the silver causes a precipitation or rather a coagulation of all superficial secretions on the conjunctiva and loosens the tenacious hold of the mucoid secretions. The eye is then flushed with mercuraphen solution, either by means of the ordinary eye cup or by some mechanical flushing apparatus. The coagulated secretions are thus washed away and the conjunctival surfaces are exposed to the action of whatever drug the oculist wishes to use. For this flushing, mercuraphen has proven particularly advantageous in that it does not irritate the eye in the slightest, the sterility of the solution is assured, and there is a decided bactericidal effect to the drug. But mercuraphen alone is seldom sufficient to overcome any infection of decided virulence.

Another advantage of mercuraphen is that instruments may be put into a 1-1,000 solution without any effect upon the steel whatever, and with assured sterilizing power.

Ethyl-Hydro-Cuprein. This much discussed drug was first described by Morgenroth and Levy of Berlin in 1911 and was introduced into ophthalmology by Goldschmidt of Leipzig in 1913. It is a triple substitution product of quinine and the highest potency results only from the use of the purest white quinine in its manufacture. Experimentally, ethyl-hydro-cuprein is a specific against pure cultures of the pneumococcus and clinically it has almost come up to the experimental expectations. But, few of the ophthalmic infections are purely pneumococcic, and as the drug is without influence upon other organisms, ethyl-hydro-cuprein alone will not relieve entirely the infection known clinically as pneumococcic, but bacteriologically proven to be mixed (even though a preponderance of the organisms may be pneumococci).

The drug is used in a one to four per cent. solution or ointment and produces a decided smarting sensation. But continued use of the drug eliminates this sensation by the corneal and conjunctival anesthesia produced. Frequent applications are often more desirable than instilla-

tions at longer intervals, and in acute infections the solution may be used every hour. It is indicated in any infection of the tear-sac, conjunctiva or cornea where pneumococci can be shown, either alone or with other organisms. The most striking results have appeared in serpiginous ulcers for in this the pneumococcus is apt to play a solitary role. If desired, ethyl-hydro-cuprein may be made into a mud and plastered directly on to the floor of the ulcer, filling the entire cavity. But neither the solution nor the ointment may be kept for more than four or five days for a decided change takes place on standing which lowers the potency of the drug.

In two other types of cases, ethyl-hydro-cuprein has proven to be of advantage. In xerosis of the conjunctiva, the pathological changes will melt away as though by magic under the influence of this drug. Vernal conjunctivitis is most irritating to the patient because of the intense itching and frequently this may be allayed by the use four times a day of a 1 per cent solution of ethyl-hydro-cuprein. But the solution has no influence whatsoever upon the course of the vernal conjunctivitis and is used only symptomatically.

Mercurochrome 220° Soluble. This combination of fluorescein and mercury was first described by Young, White, and Schwartz of Baltimore in November, 1919, and was proposed for use in acute gonorrheal urethritis where it was supposed to have a specific action. Incidentally, the use of this drug by urologists is rapidly falling into decay as the results are not as beneficial as the first reports indicated. The ophthalmic use was first brought forward by Lancaster of Boston at the Spring meeting of the A. M. A. in 1920, although many of us had been using it previously to that publication.

Mercurochrome is indicated in any acute purulent infection of the tear-sac, conjunctiva or cornea, except trachoma and Morax-Axenfeld conjunctivitis. It may be used in pneumococcic infections as an adjunct to control the secondary infection. The more acute the inflammation, the better will be the results of mercurochrome. It is used in a half to a two per cent. solution and is a vivid red. Incidentally, the solution stains everything that it comes into contact with a brilliant red which may be removed with difficulty

with cold water and somewhat easier with acidulated alcohol. In hordeola, mercurochrome, combined with hot applications, is of the greatest value and many of these inflammations may be brought to an early standstill by the prompt use of this medication. It is usually given to the patient in a one per cent. solution with directions to instill a drop into the eye anywhere from three times a day up to every hour. If used in conjunction with ethyl-hydro-cuprein or a colloidal silver, it is well to alternate the solutions every hour or two. In purulent inflammation of the tear passages, mercurochrome may be used to syringe out the sac, provided the passage is patent and there is no connection with the extra-lacrimonial tissues. A peculiarity of the solution is its intensive penetrating power of the cornea when the epithelium is either eroded or loosened. The staining properties surpass those of a fluorescein solution, although the red color is slightly less clear against the background of a brown iris than is the green of fluorescein. But in ulcers and erosions of the cornea where mercurochrome is used there results an intensive deep staining of the corneal stroma far beyond the eroded area which may persist forty-eight hours or even slightly more.

Mercurochrome is probably the most valuable addition to the ophthalmic armamentarium of recent years, for it is applicable in all of the serious external infections and the rapidity of its action seems like magic in many a case.

Holocaine. A drug of not very recent origin, but one that is not as well known as it should be is holocaine. It is a paradiethoxyethenyl-dipheylamidin hydrochloride that is soluble in acidified water, one part in fifty. The attempt to dissolve holocaine in ordinary distilled water in a glass receptacle will result in a flocculent precipitation because of the alkalinity of the water and the glass. Consequently a slight acidification is essential and this in turn produces a marked sensation of smarting which lasts but a moment.

Holocaine is a corneal anesthetic that does not produce a dilatation of the pupil. Herein lies the main advantage over cocaine; but the latter causes a deeper and more lasting anesthesia. Used in a one per cent. solution and repeated three times at two minute intervals holocaine

produces a corneal anesthesia sufficient for tonometry or removal of a foreign body. The tension of the eyeball is not influenced by the drug.

Another and but little known use of the drug is in the so-called neuropathic keratitis, particularly the keratitis punctata superficialis. The one per cent. solution may be given to the patient for home use as frequently as every two hours and the result is to lessen the intense photophobia and hasten the resorption of the corneal infiltrates. Whether this is due to some occult influence by the drug or whether the resultant anesthesia diminishes the photophobia to such an extent that light may play a healing role, cannot be said; but certain it is that a large proportion of such cases improve more rapidly with the frequent use of a one per cent. solution of holocaine than without.

Anesthetic H. This new drug, which was kindly placed in my hands for experimental use by Dr. Biehn of the Abbott Laboratories, is a para-amino-benzoyl-dibutyl - amino-propionol-succinate. It is used in a two per cent. solution to produce anesthesia of the conjunctiva and cornea and for that purpose is about twice as efficient as cocaine and about four times as rapid in its action. The resultant anesthesia lasts about twenty minutes after one instillation and may be repeated as frequently as desired. The toxicity is about equal to that of cocaine. A rather peculiar property of anesthetic H is that it produces a more rapid and much deeper anesthesia of the conjunctiva than it does of the cornea so that operations upon the conjunctiva may be undertaken within a minute after instillation. Like holocaine, it does not affect the pupil or the tension.

Anesthetic H is particularly valuable in operating upon chalazion, for two or three instillations produce a deep anesthesia of the lid tissues as far as the skin. There is but little sensation accompanying its use. In dilatation of the lacrimal puncta, it is of value from the standpoint of anesthesia as well as from the lack of contraction of the tissues. A painful probing of the tear passages may be rendered almost painless by the injection of a few drops through the lacrimal points. For tonometry or removal of a for-

eign body, it has proven the most satisfactory anesthetic used because of the deep anesthesia and because of the rapidity of action.

SOME POINTS TO BE CONSIDERED IN THE CAMPAIGN AGAINST TUBERCULOSIS

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Johnson Clinic.

ROCKFORD, ILLINOIS

The tuberculous individual is a subject of the greatest interest. Looked at from the medical standpoint, he is at times a puzzling problem in diagnosis, and a difficult case to treat. Looked at from the economic standpoint, he is often a product of unjust economic conditions and also the cause of great economic loss, and from the standpoint of sociology the correction of conditions which have lead to his disease, means the solution of some of the most vexatious problems that have confronted those who have the welfare of the human race at heart. So widespread are the ramifications of tuberculosis, so many points of contact does it have with the different activities and problems in everyday life that its complete elimination would be one of the greatest blessings that could happen to mankind. Looked at from the military standpoint, the victim of tuberculosis is a problem that must be given serious consideration and whose solution with justice to the Government and individual alike demands the most careful attention. As a cause of rejection for military service, it deprived the Government of about thirty out of every one thousand examined,¹ as a cause of disability after induction into military service, it is estimated by Turner² that for the year 1919, there were 46,000 men who had acquired the disease or had it aggravated while in the service.

The writer has kept a record of the rejections in the chest examinations of eleven thousand one hundred and twenty-nine men, four thousand ninety-six white and seven thousand thirty-three negroes in one of the southern camps during the late war. Fourteen (.34%) of the white drafted men were rejected for tuberculosis chronic inactive. Seventeen (.24%) of the negro drafted men were rejected for the same cause. An appreciable difference in favor of the negro. But

in looking over the table showing active tuberculosis, we find six white men rejected (.14%) and thirty-nine negroes or (.49%) findings decidedly in favor of the whites.

From a cursory glance at the above figures a person would say that the whites are more prone to inactive tuberculous lesions and the negroes to active lesions; however, after little reflection one will conclude that the old statement "that every one has a little tuberculosis" is true; the real test of physical fitness is in keeping the lesions from becoming active. The negroes examined were to a large extent from rural districts and small communities, and presumably were on the whole as favorably situated as negroes could be from the environmental standpoint. One is forced to conclude that there is a considerable amount of truth in the statement made by Pearl³ in a recent publication, that "the incidence of pulmonary tuberculosis is determined to a very large, if not a paramount degree by constitutional or hereditary factors rather than environmental factors." Every community has examples of persons raised under the best circumstances who have become victims of tuberculosis, and who in spite of early diagnosis and intelligent care under the best possible conditions have steadily progressed to advanced tuberculosis and finally died after a few months or years of persistent battle. We speak of these cases when no other cause can be assigned, as lacking in "resistance." The primitive races who have not until recently been exposed to tuberculosis show this lack of resistance in mass. In the white race, the susceptibility or resistance to the disease runs more unevenly.

However, there is no justification at present in regarding the environmental factor as an unimportant predisposing cause of tuberculosis. There are too many people living under improper conditions or working in insanitary surroundings yet, to warrant a relaxation in the efforts of anti-tuberculosis workers, as the close relationship between the economic state of the people and the tuberculosis rate has been known for a long time. That health, public and individual alike is to a great extent a purchasable commodity, is now recognized as being in a measure true. The falling death rate from tuberculosis in England was very much accelerated by the removal of the

tax on grain, placing good food at the disposal of the people, and with the increased economic welfare of other countries, the same downward trend of the tuberculosis rate has been noted. The happy contented man or woman whose body is well nourished and whose natural resisting powers are not impaired by insanitary surroundings, as a rule, forms poor soil for the growth of the germ of tuberculosis. The great war has borne home these observations; with improper and scanty food, hardships, worry and the mental anguish that goes with great calamities, there has been a marked increase in the tuberculosis rate of the people directly involved. In connection with these observations, it should be borne in mind that most of the cases of active tuberculosis seen in adults result from infections during infancy or childhood which have become active due to loss of immunity.

Aside from the campaign for fresh air and sanitary surroundings, it is of great importance that proper nutrition of children should receive more attention. The knowledge of the average mother in regard to what constitutes a proper diet for a child, or for that matter for an adult is rather deficient. My own observations are borne out by the statement of several country practitioners that it is very noticeable that milk, so plentiful on most farms in the middle west, is not used as extensively as a diet for country children as it should be. It is deplorable the number of children reporting at school in the morning with nothing more substantial for breakfast than a cup of coffee. The importance of placing a sufficient supply of milk of good quality within the reach of every family in the nation cannot be overestimated; and it would repay every community not only in increased health of its children, but also in dollars to see to it that proper milk is furnished children in adequate quantity.

Based on our present knowledge of tuberculosis, a campaign of education is a prime requisite in the crusade against the disease. A satisfactory economic condition will be of no avail to a person from a sanitary standpoint unless he knows how to use his means intelligently. A persistent systematic campaign of instruction in what constitutes healthful living should be pushed in every community. The schools can here be made

of great use, not only in the instruction of children, but also of the parents, especially the mothers. In many cities, mother's clubs have been formed around the different schools. Talks and demonstrations on proper food, hygiene of the home, proper recreation, prevention of disease, etc., could be made. The open air school, the visiting nurse, the school nurse and the visiting housekeeper are agencies for good common in the larger cities, but they should be introduced into every community, even into the rural districts where the population is large enough. Rural surveys that have been made in various parts of the United States have shown the need to be just as pressing for these agencies as in the cities, and in some instances even more so. Any improvement in the welfare of the people will undoubtedly show a fall in the tuberculosis rate. For example, with the disappearance of the liquor traffic there has been abolished one of the great causes of poverty, crime and degeneracy and as a result those who are interested in preventive medicine and particularly the campaign against tuberculosis can anticipate a further fall in the number of cases.

The statement was made that the health of the public and individual alike is to a great extent a purchasable commodity. No man should be forced to live in squalid surroundings and it is a good sign of the times that some leaders of industry have recognized the duty they owe their employes and have provided not only adequate wages, but proper living conditions. The economist and sociologist is in better position to suggest how the very difficult problem presented by poverty is to be met, but it must be solved in some way or other with justice to all concerned if the eradication of tuberculosis is to become an accomplished fact. The victims of unjust economic conditions form the best soil for the seed of tuberculosis. Korosi⁴ states that of each ten thousand well to do persons there die annually of consumption—40. Of the same number of moderately well to do 62.7, of poor 77 and of paupers 97. Hutchinson's⁵ statement is to the point when he says that the most expensive thing in the world for the community in the long run is poverty. In this connection the vicious circle of Rowntree⁶ is of interest. "Poor wages which means poor food, which means poor working power, which again means poor wages."

As regards prophylaxis, the sanatorium treatment is recognized now as an established tried means, not only of cure, but of prevention. The advanced case so often responsible for the wide spread distribution of the disease in a family, can be made harmless in a sanatorium for advanced cases and at the same time more comfortable than in the average home.

In connection with the sanatorium treatment of early cases for cure, the value of periodic examination should be mentioned. The time to get a case is at the very start. Unfortunately most cases do not come to the physician until well established. For this reason periodic examinations should be instituted. This could be well carried out in the different industries and in the schools. This should not be for tuberculosis alone, but for any disease or defect that may arise. The industries would save themselves a considerable amount of trouble and inconvenience and at the same time be doing their employes a favor by having these examinations carried out at stated intervals. An early case of pulmonary tuberculosis could then be detected and put under proper care with a good chance of recovery.

Where it is not possible for sanatorium care to be had, the visiting nurse will be found to be of help. In this connection the work of J. H. Pratt with his tuberculosis classes is of interest and shows what can be done under the disadvantageous conditions encountered in a large city. In the work of caring for the patient, the prevention of other cases must be continually kept in mind. Calmette and Kranse have both pointed out the importance of paying more attention to long known facts in the campaign against tuberculosis, for example the care of sputum, and the importance of pure milk. Attention must be directed not only to the human tubercle bacillus carrier, but the tubercle bacillus carriers of other species. Cumming⁷ believes that the major avenue of transmission is through eating utensils.

The preventorium as a means of preventing tuberculosis has been found to be of real help. The ease with which children are infected has been shown by Hess⁸ in his report on how ten children were infected by a nurse; hence the need of the greatest care in the raising of children, unless we should look upon a slight infection as being a means of immunization against the dis-

ease. However, there is not enough evidence yet to warrant the adoption of this view and lessening of vigilance in preventing exposure, and vaccination is still in the experimental stage. Maragliano,⁹ who has been working on the subject for twenty-five years, has recently published some significant figures, so it is not at all improbable that in the future, there will be provided a satisfactory vaccine.

There is another side of the fight against tuberculosis that should be considered. If the campaign is carried out thoroughly, there is every prospect that there will be a considerable lessening of other diseases: with well ventilated, clean, light homes will come a diminution of respiratory disorders, with clean milk will disappear a good share of intestinal diseases, particularly of infants, and the outlook for a further fall in some of the infectious diseases would be good. In connection with this, it might also be said that with the lowering of the rate of other diseases, there will be a fall in the number of cases of tuberculosis, as any disease that saps the vitality of the individual lays the person open to the bacillus of tuberculosis. The community that loyally supports the efforts of a capable and conscientious health officer in stamping out disease will show the best results. A campaign waged against a disease is bound to be followed by a reduction in the frequency of a number of other diseases. Granted proper living conditions, proper food and healthful occupation, tuberculosis is far less likely to develop than in the individual less fortunately situated.

SUMMARY

1. Active tuberculosis begins in a person whose immunity through some cause has been lowered.

2. A successful campaign against tuberculosis must be waged with the idea of raising and keeping at a high level the immunity of the individual, and the public in general. For this reason homes that are real homes, proper food, hygienic conditions personal and public alike, and sanitary working conditions are essential.

3. The proper care of active cases with the purpose in mind not only of curing the patient himself, but also of protecting the public.

4. A campaign of education in proper living, to include not only instruction in the nature and

prevention of diseases, but also in what will make life pleasant and worth while. It is well recognized that the campaign against tuberculosis is really a campaign for the social and economic improvement of mankind.

REFERENCES

1. Davenport and Love: Scientific Monthly, January, 1920.
2. Turner: Quoted by The Modern Hospital, August, 1920, page 93.
3. Pearl: Jour. A. M. A., Feb. 7, 1920.
4. Korosi: Conquest of Consumption, by Hutchinson, page 88.
5. Hutchinson: Conquest of Consumption, by Hutchinson, page 92.
6. Rowntree: Conquest of Consumption, by Hutchinson, page 88.
7. Cumming: Jour. A. M. A., April 17, 1920.
8. Hess: Transactions of the Ninth Annual Meeting of the Association for the Study and Prevention of Tuberculosis.
9. Maragliano: Riforma Medica, July 5, 1919.

Book Reviews

THE SYNERGISTIC INFLUENCE OF THYROID AND PITUITARY EXTRACTS UPON THE ACTION OF ADRENALIN. *All Policlinico*, July 19, 1920.)

Ascoli shows that infinitesimal quantities of thyroid and pituitary extracts markedly strengthen the action of adrenalin. Should these extracts be used in cases of hypoadrenia? As a matter of routine could they be used in cases demanding adrenalin to reinforce its action and possible secure results where we have hitherto failed? One-fifth of the ordinary dose of adrenalin gave the same results with thyroid or pituitary as was obtained by the full dose without them.

PSORIASIS AND AMENORRHOEA CURED BY OVARIAN THERAPY. (*La Riforma Medica*, March 27, 1920.)

Verotti reports a case of ovarian insufficiency in a woman of 29 who had always menstruated regularly until she was 23, when scanty, irregular menstruation began which finally ended in amenorrhoea. Very shortly after the suppression of the menses, psoriasis began and resisted all efforts both local and constitutional. After four years, ovarian substance was given and eventually menstruation returned. Coincident with the appearance of menstruation, the psoriasis improved and finally disappeared. Psoriasis is now classified with the arthritic manifestations, gout, chronic rheumatism, and diabetes, as one of the consequences of ovarian insufficiency.

THE CONTAGION OF STAMMERING AND STUTTERING.

The autobiography of a stammerer republished from the *Volta Review* (Feb., 1921), a journal devoted to speech-reading, speech and hearing, is reproduced in the hope of stimulating further research into the causes and cure of this unfortunate affliction.

EYE, EAR, NOSE AND THROAT NURSING. By A. Edward Davis, M.D., and Beaman Douglas, M.D. Second revised edition with 32 illustrations. Philadelphia. F. A. Davis Company, 1920. Price, \$2.50 net.

This work has been brought down to date. Every chapter has been carefully revised, new matter incorporated and an entire new chapter on vaccine and serum treatment added.

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MAY, 1921

Editorial

DOCTOR, YOU ARE WASTING YOUR TIME AT THE CAPITOL; GO HOME AND ORGANIZE

Our good medical men, everywhere, give up their time and money and energy, gladly and generously when the object is the service of their kind but when their material interests demand defense, it is difficult to make their self-protection centers function. It was the blunt recognition of this very peculiarity which helped a doctor in New York jolt his fellows in the profession to a sense of duty, because a New York State Senator had said to him:

"Your doctors are the dearest people on earth and we love every hair in your heads—as *individuals*; but as a *class*, you are pitiable! you spend your time, money and energy for the advancement of science and the betterment of mankind and you don't know the first thing about self-preservation. The propagandists are *organized*; you are *not* and you are not even well informed. You are wasting your time at the Capitol. Go home and organize."

THE HOUSING SHORTAGE A PUBLIC HEALTH PROBLEM

The shortage of houses in our large cities has obviously had a bad effect on the general health. Not only is there a lamentable lack of housing accommodations, but a considerable proportion of that which exists is inadequate and unhygienic. The result is that health and morals suffer, and, in fact a good deal of the industrial unrest at the present time is due to inadequate and bad housing.

In New York City it is claimed that 100,000 families are doubling up with one or more other families. We are quite reliably informed that there are places in that city where a score or more persons live in three or four rooms. It is also claimed that four or more persons sleep in a kitchen every night; and it is also stated that there are hundreds of rooms in which four or five persons sleep. This overcrowding cannot help but be so injurious to health that tuberculosis is bound to result from living in such insanitary conditions. This condition does not apply solely to New York, but is a serious problem in all the large cities where the inhabitants are suffering from overcrowding.

WHY ILLINOIS DOCTORS OPPOSE ANNUAL RE-REGISTRATION

First. The principle is wrong; it savors of autocracy which latter is repulsive to American ideals.

Second. Because of unpleasant experience with the first Director of the Department of Education and Licensure, a layman and an autocrat of the most pronounced type, who no sooner discovered the autocratic powers that fell within the scope of his office than he attempted to put over a re-registration law one of the provisions of which read:

"In every proceeding under the provisions of this Act an averment that the defendant at the time of the alleged offense was without the required license or certificate of renewal of registration shall be taken as true, unless disproved by the defendant. This paragraph would represent Bolshevism in action.

Third. A re-registration law would serve to beat practitioners into submission to those "wise social experiments" or into innocuousness by denying him the right to practice his profession.

Fourth. A re-registration law would act as a legislative club to beat the practitioners into submission to panelization or to render them innocuous by taking away their licenses under the police power of the State (Dr. Dent vs. State of West Virginia, 129 U. S. Reports, page 114, year 1889).

Fifth. It nullifies the license already granted a doctor to practice medicine in perpetuity and substitutes therefore a year to year license.

Sixth. The present registration in the County Clerk's Office is sufficient.

Seventh. The record of every doctor licensed to practice medicine in Illinois is on file in the Department of Education and Registration at Springfield.

Eighth. It is class legislation in that the profession is to be charged a fee to create a fund purging the State of illegal practitioners when as a matter of fact this duty devolves upon the State and not upon the medical profession. Ridding the State of illegal and incompetent practitioners is a measure purely in the interest of the people who should pay for it and not have it placed as an extra tax upon the medical profession.

Ninth. It is unnecessary as the police power

already exists for the control of practitioners not duly licensed. More law is not needed but better enforcement of existing law is.

Tenth. It is demeaning to a great and noble profession in its requirements as to filing of photographs. Why not finger prints?

Eleventh. It will cause expense and inconvenience with no proportionate return to the public or to the profession.

Twelfth. It is a humiliating and absurd proposition, this annual re-registration and the fee of \$2.00 for the privilege of announcing to your beloved people, who have known you to be a Doctor for a score or more of years, that given life and health and the gracious permission of the clerk to whom you proffer your \$2.00 fee, you expect to continue to be a Doctor for the ensuing year.

THE NEW YORK STATE MEDICAL SOCIETY OPPOSES HEALTH CENTERS AND ALLIED SCHEMES

The following resolution was adopted by the House of Delegates of the Medical Society of the State of New York at its Annual Meeting at Brooklyn on May 2, 1921:

Resolved, That the Medical Society of the State of New York is emphatically opposed to "State Medicine," and to any scheme for "Health Centres," "Group Medicine," and "Diagnostic Clinics," either wholly or partly controlled, operated or subsidized by the State or National Government; and that the Delegates from this Society to the American Medical Association be and are hereby instructed to present this resolution to the House of Delegates of the American Medical Association at its coming meeting in June and to use every possible means to secure its adoption.

"THE SECRETARIES' CONFERENCE"

Scottville, Illinois, April 18, 1921.

Those who have been attending the Conferences held by the Secretaries have observed a decided improvement in the interest manifested and an increase in numbers in attendance the last few meetings.

The Conference to be held this year is one which promises to be the most interesting in the history of the Secretaries' Conferences.

For the Doctor, who is President or has been

President of the County Medical Society, papers are to be given that will interest him.

For the Doctor who is a County Secretary, or has been County Secretary, papers will be given which will interest him. For those who have never had the honor of filling either of these places, papers will be given which will interest them. So whether you have been an official or not, these Conferences should be of sufficient interest to cause you to attend the meeting.

The papers given will be noted for their briefness and because of the ability of the writers: will be concise, comprehensive, spicy, and of unusual interest to all who attend the Conference.

It is hoped that every physician who expects to attend the meeting of the State Medical Society will make an effort to attend this Conference as at the time of the Secretaries' Conference no other business will be taken up.

T. D. DOAN,
Secretary.

NOTICE

The annual dinner of the Alumni of the medical department of the University of Illinois will be held on May 18, during the meeting of the Illinois State Medical Society. Look out for placards giving the location. Every alumnus of the university should attend this dinner.

KARL A. MEYER, M. D.,
President, Alumni of the
University of Illinois.

THEY HAVE NOTHING IN COMMON WITH THE PRACTICING PHYSICIAN

When you see the name of a State Institution on a letterhead, set it down that the writer hasn't a thing in common with the practicing physician. He is with the man who would make of medicine a poorly regulated business. They depend on politics for their salaries, for their handsome homes, for all the perquisite which are part and parcel of their office and it is human nature to let a thing alone which spells comfort and safety for oneself. Now, go over your delegates and find out how many have come from the ranks of the salaried men. You cannot afford and neither can I to go tramping around the country but the head of an institu-

tion with all its subordinates to do the real work can go as often and stay as long as he pleases. His salary goes on just the same. If a college professor goes out on a career of propagandizing and uplifting, his salary goes on just the same; his understudy does the work and there you are. In the gamble, the working physician is putting down real money, while his salaried opponent is putting down discredited beer checks. Think it over and see if I am not right.

INFORMATION FOR CONTRIBUTORS TO THE JOURNAL.

It is expressly understood that articles contributed to the ILLINOIS MEDICAL JOURNAL have not been and, if accepted, will not be offered to another journal for prior or simultaneous publication: no objection can be raised for the subsequent reproduction of any of them. Although it is believed that reprinting or simultaneous reproduction of papers in readily accessible journals in a given field is professionally unnecessary, bibliographically undesirable and economically wasteful, however, if a contributor has a paper printed elsewhere subsequently to its appearance in the ILLINOIS MEDICAL JOURNAL (excepting a volume of society transactions), due credit shall be given for original publication. The editor relies upon all contributors to conform to this rule.

Manuscripts should be typewritten, preferably double spaced, and only clear verified copies presented. The name and address of the author should appear under title of the paper. Literature cited should be assembled at the end of a manuscript in numerical order and should be numbered serially. These bibliographic items in the list should be referred to in the text by numerals in parentheses corresponding with the sequence numerals in the list. Each item in this reference list should consist (in this order) of the (a) numeral indicating its sequence in the list, (b) name of the author, (c) year of publication, (d) exact title of the paper (or book) referred to, (e) full title of the periodical containing the paper, (f) volume numeral for that periodical, and (g) numeral for the first page (or page specially cited) of the paper.

All illustrations should be submitted in such forms as to admit of photographic reproduction without retouching or redrawing. Marginal letters cannot always be set in type and should, therefore, be written in India ink and regarded as parts of the original illustrations; or, in doubtful cases, the marginal lettering may be inserted temporarily, with lead pencil, for suitable attention by the editor. Unless specific instructions are given by authors, the printer will be requested to determine the degree of reduction that may most suitably be applied in illustration. Reproduction of illustrations can be effected most satisfactorily, as a rule, when the originals are large enough to permit of considerable reduction in the plates prepared from them.

THE EVOLUTION IN MEDICAL PRACTICE AND WHAT AILS THE MEDICAL PROFESSION

"Charity suffereth long and is kind."

A long-suffering and much abused medical profession is patiently awaiting the cessation of the wrongs being done it by society and demands the right in the future to be consulted in the solution of the particular problems before the country.

The editor is repeatedly asked "what ails the medical profession?" and this from men who formerly gave no thought to the great problem of the integrity of the profession either from the social or economic viewpoint.

Certain it is that few doctors realize the profound change which has come over the relation of the physician to the community. Very few can explain the cause of the present-day unrest and dissatisfaction that exists within the profession.

How very few members of this great and honorable profession appreciate fully the great change that has come about in recent years and that the transformation is largely, if not wholly, due to the recent extensive developments in Sociology.

How few doctors realize that as a class physicians have taken too little interest in the broader aspects of their profession and realize that unless this attitude is abandoned, there is positive danger of medical men having in the future no voice in shaping state policies which will vitally affect their interests.

The changing relationship of the profession and the public warrants a more careful study of the many problems which lie outside of scientific medicine. Medical practice is a business and requires guardianship the same as other interests. The abuse of medical charities by hospitals and dispensaries, compulsory health insurance, state medicine, health centers, the National Socialization of medicine, lodge practices, contract practice, the over-trained nurse, unscrupulous pharmacists, underpaid doctors, the "quack," the patent medicine man, the quack druggist—all of these are enemies of the legitimate practice of medicine and detrimental to the best interests of the public.

Everywhere and more especially in the large cities of America, the doctor is engaged in an economic struggle. It is forced on him mainly

by the competition of the medical institutions erected by philanthropists who become their directors and make relatives or favorites the heads of their departments. For obvious reasons, these positions are much in demand, large sums are paid for them, and the incumbents taxed with unusual contributions. To increase the number of these, profitable positions, new dispensaries, new hospitals are from time to time established. The public rush to cheap places for treatment by a professor (?) which can be obtained for a nominal fee, and the old faithful friend, the family physician, is dismissed. The policy in the past has been to pay as little as possible for medical services; indeed, this is the standardized policy of the public at the present time. As the result of this unsatisfactory condition, the "quack" is flourishing and another type of overworked and underpaid "lodge doctors" has been forced into existence as a result of all the evils mentioned, there has been a decline in the income of physicians; this has led to fee-splitting, unnecessary consultations and operations, conditions which, in connection with other well-known shortcomings, have created a situation which urgently calls for remedies. To find a remedy for existing evils will benefit the profession and the public mutually.

At the time of going to press with this issue, the physicians in Illinois are threatened with a veritable deluge of vicious medical legislation that will put the care of the people's health into the hands of incompetent osteopaths, naturopaths, neuropaths, chiropraths, cosmeticians and the fifty-seven other varieties of paths and isms which are seeking legislation to permit them to practice medicine in the full meaning of the term without qualifying, as doctors are obliged to do.

Our experience with the law-makers at Springfield in both houses of the legislature, over a period of twenty years, have shown us by their actions and votes that a large minority and in some instances a majority in either house, believe and openly avow that medical attendance is and ought to be a free merchandise to be proffered and bought by anyone in an unrestricted market under the principle of "let the buyer beware!"

According to many of our Solons, no man has a right to be protected against his own ignorance, providing, of course, his particular brand of col-

lective ignorance makes a fair showing in the statistical papers of enrolled voters. We are living in a sham Democracy where, for aught we know, diphtheria may be abolished today by referendum and typhoid fever, in Christian Science terms, declared a mere "claim," tomorrow, by a handsome plurality at the county election. Exaggeration? Not a bit! As an example, of what we have in view, we have only to call attention to the three amendments and one recall that came up for consideration before the voters of California on November 2, 1920, namely, the chiropractic initiative amendment, the anti-vaccination amendment, the anti-vivisection amendment, and the so-called poison act.

WHO DISCOVERED ETHER?

Ether was first used as an anaesthetic by Dr. Charles Thomas Jackson of Boston, March 30, 1842. The discovery has been claimed for Dr. William T. Morton, who studied under Jackson. The record shows that on Sept. 30, 1846, Dr. Morton administered ether to a patient successfully. In 1852 the French Academy of Sciences recognized Dr. Jackson as the discoverer and Dr. Morton as the first to apply the discovery in surgical operations.

Another account says that ether is the earliest known anaesthetic and was extensively used in Europe before the introduction of chloroform, and that it was discovered probably as far back as the thirteenth century.

OLD ONES ARE THE BEST

UP-TO-DATE FARMING

We've bathed the bossie's tootsies, we've cleaned the rooster's ears,

We've trimmed the turkey's wattles with antiseptic shears.

With talcum all the guinea hens are beautiful and bright,

And Dobbin's wreath of gleaming teeth we've burnished snowy white.

With pungent sachet powder we've glorified the dog,
And when we have the leisure we'll manicure the hog.

We've done all in our power to have a barn de luxe:
We've dipped the sheep in eau de rose; we've sterilized the ducks.

The little chicks are daily fed on sanitated worms,
The calves and colts are always boiled to keep them free from germs.

And thoroughly to carry out our prophylactic plan,
Next week we think we shall begin to wash the hired man.

Illinois State Medical Society

SEVENTY-FIRST ANNUAL MEETING

Springfield, May 17, 18 and 19, 1921

ORDER OF PROCEEDINGS

Registration, Headquarters, Bureau of Information and Exhibit Hall, Basement of Masonic Temple.

First Day—Tuesday Afternoon

1:00—Eye, Ear, Nose and Throat Clinic, St. John's Hospital.

2:30—Call to order of the Society in General Session, by the President, W. F. Grinstead of Cairo. Blue Lodge Room, Masonic Temple.

Report of Committee on Arrangements, H. B. Henkel, Chairman.

3:00—Call to order of Secretaries Conference. H. A. Chapin, Jacksonville, President. Blue Lodge Room, Masonic Temple.

4:00—Meeting of Committee on Credentials, Masonic Temple. Credentials of all Delegates must be presented to this Committee.

First Day—Tuesday Evening

6:30—Banquet of Section on Eye, Ear, Nose and Throat, Sun Parlor of Leland Hotel. Price per plate \$3.50.

8:00—Call to order of the House of Delegates, by the President, W. F. Grinstead. Ball Room, Masonic Temple.

Second Day—Wednesday Morning

9:00—Call to order of the Sections for the reading and discussion of the papers of the program.

Section on Surgery, Commandery Room, third floor, Masonic Temple.

Section on Medicine, Ball Room, Masonic Temple.

Section on Public Health and Hygiene, Blue Lodge Room, Masonic Temple.

Section on Eye, Ear, Nose and Throat, Sangamo Club.

12:00—Alumni Banquets. Make reservations at Registration Office in Exhibit Hall.

Second Day—Wednesday Afternoon

1:00—Auto ride for the ladies. Starting point, south door of Leland Hotel.

1:30—Call to order of the Society in General Session by the First Vice-President, John E. Tuite of Rock Island. Commandery

Room, third floor, Masonic Temple.
President's Address, W. F. Grinstead,
Cairo.

Oration on Surgery.

Prehistoric American Surgery. Lantern
slides. Leonard Freeman, Denver, Colo-
rado.

Oration on Medicine, "New Viewpoints
in Nutrition in Infancy and Childhood,"
Albert Henry Byfield, Professor of
Pediatrics, State University of Iowa,
Iowa City, Iowa.

3:30—Reception at Governor's Mansion for
ladies.

Second Day—Wednesday Evening

7:15—Stag entertainment, Masonic Temple.
Courtesy of the Springfield Entertain-
ment Group.

8:00—Reception by Ladies of Springfield for
Visiting Ladies, Leland Hotel.

9:30—Dance, Leland Hotel. Grand March led
by the President and President-elect of
the Society.

Third Day—Thursday Morning

9:00—Call to order of the Sections for the con-
tinuation of the program.

11:00—Essay on Medicine, "Differential Diag-
nosis of Early Tuberculosis from Other
Apical Inflammations." Lantern slides.
Kennon Dunham, Cincinnati, Ohio.

Third Day—Thursday Afternoon

1:30—Reconvening of the Sections.

2:00—Essay on Surgery, "Factors Determining
the Efficiency of Operations Upon the
Stomach," W. Wayne Babcock, Phila-
delphia, Pa.

3:00—Call to order of the Society in General
Session, by the President, Commandery
Room, Masonic Temple.

Report of the Proceedings of the House
of Delegates.

Induction of President-elect.

By invitation. Empyema, Closed Treat-
ment. Motion pictures. Arvine E.
Mozingo, Indianapolis, Ind.

4:30—Reconvening of the Sections.

6:00—Final adjournment.

OFFICIAL PROGRAM

SECTION ON SURGERY

G. S. Edmondson, Chairman.....Clinton
G. C. Amerson, Secretary.....Chicago

*Commandery Room, Masonic Temple, Wednes-
day, May 18, 1921, 9 a. m.*

1. Visceroptosis—James A. Day, Springfield.

2. Ulcer Cure Following Gastric Surgery—
Karl Meyer, Chicago.

Discussion—R. W. McNealy, Chicago.

3. The Management of Abdominal Wall In-
fections—A. M. Miller, Danville.

Discussion—Coleman Buford, Chicago.

4. Jejunal Diverticula—Hugh N. MacKee-
nie, Chicago.

Discussion—John R. Harger, Chicago.

5. Lipoma of Kidney with Report of Cases—
J. W. Alexander, Charleston.

Discussion—E. P. Sloan, Bloomington.

6. Treatment of Unusual Fractures—C. R. G.
Forrester, Chicago.

Discussion—C. W. Hopkins, Chicago.

C. E. Pierce, Chicago.

7. Management of Fractures Near the Joint—
Philip H. Kreuscher, Chicago.

Discussion—George Thompson, Chicago.

8. Some Surgical Aspects of Endocrinology—
Don W. Deal, Springfield.

9. Relation of Group Practice to Surgery—
Edward H. Weld, Rockford.

Discussion—Carl Beck, Chicago.

Frank Smithies, Chicago.

10. Bismuth Paste Injection for the Treatment
of Cervicitis and Endocervicitis—A. R.
Hollender, Chicago.

Discussion—J. R. Pennington, Chicago.

11. Post-operative Pulmonary Complications—
F. A. Norris, Jacksonville.

12. Congenital Pyloric Stenosis—John A.
Graham, Chicago.

Discussion—M. L. Harris, Chicago.

13. Psychology a Factor in Surgery—F. H.
Gunn, East St. Louis.

14. Present Status of Bile Tract Surgery—
Arthur Dean Bevan, Chicago.

Discussion—Dean D. Lewis, Chicago.

15. The Indications for Surgical Treatment of
Uterine Fibroids—E. B. Montgomery,
Quincy.

Discussion—Chas. L. Patton, Springfield.

16. Carcinoma of Breast with Report of Cases
—Carl Black, Jacksonville.

17. Factors Determining the Efficiency of
Operations Upon the Stomach—W.
Wayne Babcock, Philadelphia.

18. Surgery of the Large Bowel—Carl B. Davis, Chicago.
Discussion—George Apfelbach, Chicago.
19. A Plea for a More Thorough Examination of the Back, from a Surgical Standpoint—J. H. Bacon, Peoria.
20. Non-Perforated Appendicitis with Peritonitis and Abscesses—G. L. McWhorter, Chicago.
Discussion—Carl B. Davis, Chicago.
E. M. Miller, Chicago.
21. Acidosis in Surgical Anesthesia—M. E. Rose, Decatur.
22. Acute Aneurism—R. W. McNealy, Chicago.
Discussion—Karl Meyer, Chicago.
23. Treatment of Complete Prolapse of the Rectum in Adults—Chas. J. Drneek, Chicago.
Discussion—Channing Barrett, Chicago.
Frederick Besley, Chicago.
24. Obturator Hernia—Leigh F. Watson, Chicago.
Discussion—Karl Meyer, Chicago.
25. Spontaneous Tumor Growth in Abdominal Incision Preventing Healing—L. B. Elliston, La Salle.

SECTION ON MEDICINE

W. L. Callaway, Chairman.....Chicago
H. A. Chapin, Secretary.....Jacksonville
*Ball Room, Masonic Temple, Wednesday,
May 18, 1921, 9 a. m.*

1. Early Neurological Symptoms in Primary Anemia—Garn Norbury, Jacksonville.
2. Lesions of the Spinal Cord. Lantern slides—J. Elliott Royer, Chicago.
Discussion—Archibald Church, Chicago.
3. Psychopathic Children, Their Recognition and Treatment—Graves B. Smith, Godfrey.
4. Syphilis of the Stomach with Report of Cases—Milton H. Mack, Chicago.
5. Several Important Points in the Diagnosis of Pulmonary Tuberculosis—Roswell T. Pettit, Ottawa.
6. Epilepsy—James C. Gill, Chicago.
7. The Diagnosis and Therapeutic Value of Nonsurgical Biliary Tract Drainage in Patients Exhibiting Biliary Tract Disease Upon Whom Surgical Procedures Have Previously Been Performed—Frank

Smithies, Chicago: Richard Bartlett Oleson, Chicago.

8. Foot Problems. Illustration Films—Elizabeth B. Ball, Quincy.
Discussion—C. W. East, Springfield.
9. Therapeutics of Occupation in Mental Disorders. Lantern Slides—Charles F. Read, Dunning.
Discussion—Frank P. Norbury, Springfield.
10. Colitis—W. J. Butler, Chicago.
11. Hypothyroidism—David B. Penniman, Rockford.
12. Etiologic and Therapeutic Conditions in Arthritis—George Parker, Peoria.
13. SYMPOSIUM—FOCAL INFECTIONS.
Clinical Study of Chronic Infections—Ernest E. Irons, Chicago.
Focal Infections from the Surgical Standpoint—C. U. Collins, Peoria.
Focal Infections in Dentistry—Charles Bentley, D. D. S., Chicago.
Focal Infections of Genito-Urinary Tract—Herman Kretchmer, Chicago.
The Role of Focal Infections in Neurology—C. B. King, Chicago.
Focal Infections in Ear, Nose and Throat—M. W. Brucker, Chicago.
Diagnostic Value of Roentgenology in Focal Infections—F. S. O'Hara, Springfield.
Discussion—Theodore Ticken, Chicago.
Albert M. Miller, Danville.
T. L. Gilmer, Chicago.
J. S. Nagel, Chicago.
J. R. Ballenger, Chicago.
T. J. Williams, Chicago.
W. E. Hart, Decatur.
14. Essay on Medicine—Differential Diagnosis of Early Tuberculosis from Other Apical Pulmonary Inflammations. Lantern Slides—Kennon Dunham, Cincinnati, Ohio.
15. Obstetrics. Why the Death of Fifteen Thousand Mothers Annually?—J. S. Templeton, Pinckneyville.
16. Pituitary Extract in Treatment of Diabetes Insipidus—H. A. Cables, East St. Louis.
Discussion—C. M. Jack, Decatur.
17. Some Points in the Diagnosis of Late

Hereditary Syphilis—B. Barker Beeson, Chicago.

Discussion—William Allen Pusey, Chicago.

18. Organotherapy in General Practice—C. V. McMeen, Springfield.

SECTION ON EYE, EAR, NOSE AND THROAT

C. F. Burkhardt, Chairman.....Effingham

A. H. Andrews, Secretary.....Chicago

Sangamo Club, Wednesday, May 18, 1921, 9 a. m.

1. Practical Perimetry—Harry S. Gradle, Chicago.

Discussion—Geo. F. Suker, Chicago.

2. Two Problems in Bronchoscopy and Their Solution—G. W. Boot, Chicago.

Discussion—Otto J. Stein, Chicago.

3. Precautions Necessary in Cataract Operations—W. A. Fisher, Chicago.

Discussion—Thos. Faith, Chicago.

4. Refinements in Cataract Operations—C. B. Welton, Peoria

Discussion—W. O. Nance, Chicago.

5. Methods of Applying Radium in Diseases of the Upper Air Passages—Otto T. Freer, Chicago.

Discussion—R. Sonnenschein, Chicago.

6. Retro-Bulbar Neuritis of Ethmoid Origin—W. G. Reeder, Chicago.

Discussion—J. C. Beek, Chicago.

7. Status Lymphaticus—R. J. Tivnen, Chicago.

Discussion—A. L. Adams, Jacksonville.

8. Legal Compensation for Visual Loss—Frank Allport, Chicago.

Discussion—R. J. Tivnen, Chicago.

9. Ocular Manifestations of Syphilis—E. F. Garraghan, Chicago.

Discussion—W. R. Fringer, Rockford.

10. Practical Points in Tonsillectomy—W. H. Peck, Chicago.

Discussion—Louis Ostrom, Rock Island.

11. Stricture of the Lachrymal Canaliculi with Improved Operative Technique—I. M. Miller, Kewanec.

Discussion—J. S. Clark, Freeport.

12. Bilateral Abducens Paralysis—H. W. Woodruff, Joliet.

Discussion—W. P. Walter, Evanston.

13. Intracranial Complications of Nasal Accessory Sinus Disease—C. F. Yerger, Chicago.

Discussion—H. C. Ballanger, Hubbard Woods.

14. Difficult Cases in Bronchoscopy—Edwin McGinnis, Chicago.

Discussion—E. C. Spitze, East St. Louis.

15. A Modification of the Submucous Resection Operation—O. J. Nothenberg, Chicago.

Discussion—G. H. Mundt, Chicago.

The time for reading papers will be limited to ten minutes and discussions to five minutes.

SECTION ON PUBLIC HEALTH AND HYGIENE

J. H. Siegel, Chairman.....Collinsville

Mary J. Kearsley, Secretary.....Chicago

Blue Lodge Room, Masonic Temple,

Wednesday, May 18, 1921, 9 a. m.

1. The Necessity for Prenatal Care of Obstetric Cases—H. F. Lewis, Chicago.

2. Cooperation Between the State Medical Society Members and the State Department of Public Health—I. D. Rawlings, Director of Public Health, Springfield.

3. The Campaign for the Prevention of Syphilis—Arthur W. Stillians, Chicago.

4. Public Health Problems—C. W. Lillie, East St. Louis.

5. The Medical Aspects of Malnutrition in Children—Caroline Hedger, Chicago.

6. Certified Milk—J. W. Van Derslice, Oak Park.

7. Hygiene in Tuberculosis—M. W. Harrison, Collinsville.

8. Title to be announced later—Curtis J. Lyter, St. Louis, Mo.

SECRETARIES' CONFERENCE

H. A. Chapin, President.....Jacksonville

L. O. Frech, Vice-President.....White Hall

T. D. Doan, Secretary.....Scottsville

Blue Lodge Room, Masonic Temple,

Tuesday, May 17, 1921, 3 p. m.

1. The County Secretary as Viewed by the County President—I. W. Bach, Douglas County; F. A. Morris, Morgan County.

2. The County Secretary as Viewed by the County Secretary—Elizabeth B. Ball, Adams County; T. D. Doan, Macoupin County.

3. The County Secretary as Viewed by the Member—C. U. Collins, Peoria County;

M. Herschleder, Macoupin County; F. A. Renner, St. Clair County.

EXHIBITORS AT THE SEVENTY-FIRST ANNUAL MEETING

Mellin's Food.
A. S. Aloe.
Intravenous Specialty Co.
Radium Company of Colorado.
Lavoris Chemical Company.
Mead, Johnson Company.
National Physicians Supply Company.
Childs Drug Company.
Horlick's Malted Milk Company.
H. G. Fisher and Company.
Fellows Manufacturing Company.
The Kolynos Company.
Abbott Laboratories.
Hynson, Westcott and Dunning.
Radium Chemical Company of Chicago.
W. G. Cleveland Company.
Burdick Cabinet Company.
Sharp & Smith.
John McIntosh.
Wright and Lawrence.
Charles H. Phillips.
White-Haines Optical Company.
C. H. Sherman.
C. V. Mosby.
Kolynos.
H. Metz.
W. B. Saunders.
Keasby and Mattison Company.
Huston Brothers Company.
Medical Protective Company.

MISSOURI TAKES A STEP BACKWARD

A few weeks ago a bill passed the Missouri legislature which struck out of the medical practice act the word "reputable," as related to medical colleges, and substituted therefor the words "legally chartered." As noted in the news columns last week, in spite of vigorous protests against it, the governor signed the measure. Thus at one stroke authority is taken away from the Missouri State Board of Health to perform its most important function—that of protecting the public against incompetent practitioners of the healing art. The present amendment to the practice act places the state in a position as bad as, if not worse than, that which existed twenty or more years ago.

THE FOUNDATION FUND OF THE TRI-STATE DISTRICT MEDICAL SOCIETY

A COMMUNITY TRUST FUND FOR PRACTICAL POST-GRADUATE UNIVERSITY TEACHING COURSES DIRECTLY TO PROFESSION IN SMALLER COMMUNITIES

HENRY G. LANGWORTHY, M. D.
DUBUQUE, IA.

The Tri-State District Medical Society of Illinois, Iowa and Wisconsin has made a real contribution toward the practical solution of the important problem of carrying the highest type of post-graduate university teaching directly to the smaller communities of the three states. Recognizing the difficulty of doing the bigger practical things for the profession without sufficient funds, the society, through its general chairman, in 1919 centered the best business, banking, legal and professional brains possible on its difficulties, and from such conferences originated a definite plan and started a Foundation (Endowment) Fund of ultimately not less than \$100,000.00, the income of which would gradually enable the society to carry out its aims. That it is already doing this thing one has but to ask almost any member of the medical profession anywhere near the cities of Freeport, Madison, Dubuque, Rockford and Waterloo, in which meetings have already been held, to be fully and satisfactorily convinced.

THE FOUNDATION FUND
A MODERN COMMUNITY TRUST

A brief explanation of this form of modern community trust for the advancement of medical science and preventive medicine in the smaller cities of the three states will be of interest.

First: The Foundation Fund offers a distinct, definite and permanently safe place to which any physician desiring to further post-graduate medical education may donate a sum of money, either large or small, and feel that the income from that sum will go forward with many others like it to do its part for the benefit of the profession and humanity.

Second: Through the establishment of the Foundation Fund the physician is now more fully warranted than in the past in creating his own individual endowment, as it were, with the

positive assurance that his gift will be brought into immediate and real usefulness through the powers of a representative Board of Trustees who act as the committee of administration and expenditure for the society.

Third: The Foundation Fund plan as adopted will avoid the possibilities of partial failure sometimes seen in cases of either under-endowment or in gifts with hampering or fixed restrictions and covers particularly that condition of constant change in our medical outlook by recognizing that the medical problem of the practicing physician of each decade "can be better solved by the best minds of that decade rather than through the medium of some dead hand of the past."

Fourth: The Foundation Fund, already well started, is made up of the smaller gifts of many active physicians from all sections of the three states as a truly democratic American medical community fund. The purchase of a "life membership" in the society by the payment of two hundred dollars is but another way in which the physician may not only donate to a splendid cause, but at the same time personally enjoy all the benefits of the society as well. Subscriptions for such purposes may be made payable in installments over a period of one year if desired.

Fifth: Finally the Foundation Fund of this society offers the clear opportunity for the physician of smaller means without direct descendants, or one also of large means, after having properly cared for his own, to thoughtfully provide that a small portion of his estate shall remain intact in the Foundation Fund for the Tri-State District Medical Society of Illinois, Iowa and Wisconsin as a memorial trust fund the income of which will assist so materially in carrying on the splendid educational work of the association. The names of the present officers and trustees of the society are noted in the advertising section.

The foregoing briefly embodies the society's "community trust" fund for the profession. The fund, already well started by donations to the amount of several thousand dollars, has been placed by the trustees in the care of the Federal Deposit and Trust Co., of Dubuque, Iowa, as the financial secretary under the strict controlling trust laws of the State of Iowa. The income from the fund will be used to defray such society expenses as are considered proper by the

Board of Trustees elected annually by the society for varying terms and composed of three physicians from each state. The society is now asking the financial support of every member of the profession in order to complete its initial endowment of not less than one hundred thousand.

IMPORTANT BILLS BEFORE THE LEGISLATURE THAT ARE OF INTEREST TO THE MEDICAL PROFESSION

We have marked the word "opposed" after those bills that we are actively working against, and the word "favorable" after the ones that we are in need of, and the unmarked bills are the ones that are of interest, but we are not taking an active part for or against them. "H" indicates House Bills. "S" indicates Senate Bill.

H. 17.—E. A. W. Johnson—Exempts optometrists from jury service. Judiciary Committee (Watson). (Same as S 1 on third reading). (Postponed).

H. 31.—Shearer—Amends Sec. 12 of Workmen's Compensation Act. Injured employee need not submit himself to a medical examination, if any payments, by virtue of an agreement or award under this act are due and unpaid. February 1, Judiciary Committee. April 26, passed House.

H. 65.—Baldwin—Dental hygiene. February 3, Judiciary Committee (Watson). Recommended do pass as amended.

H. 194.—Vice—Physician cannot practice Dental Surgery. February 16, Judiciary Committee (Watson). Opposed.

H. 217.—Krump—Licensing of cosmetic therapy (beauty doctors). February 23, License Committee (Thomas Curran). Recommended do pass. April 18, 1st reading. Opposed.

H. 236.—Bippus—Chiroprody. Tabled. Opposed.

H. 243.—Gieseler—Reciprocity of Medical Practitioner of Foreign country of equal standards. February 24, License Committee (Thomas Curran). April 26, hearing. Opposed, present status sufficient.

H. 249.—McCabe—Injured employee may employ own physician at employer's expense (Workmen's Compensation Act). March 1, Judiciary Committee (Watson VS).

H. 264.—Thon—Amends Civil Administrative Code to include Physician on Board of Na-

tional Resource and Conservation Advisors. March 1, Efficiency and Economy (Sonneman). April 26, 3rd reading. Favored.

H. 283.—Stubbles—Medical license may be revoked only after order of County Court where a licensee resides. March 2, Efficiency and Economy Committee (Sonneman). Opposed.

H. 344.—Sonnemann—County may appoint County Health Commissioner to enforce health, sanitation and nursing laws. (Same as S. 187). March 9, Judiciary Committee (Watson). Health Dept. wants.

H. 388.—Holaday — Amends Occupational Disease Act. Industrial Committee. Hearing, 3:30 April 27.

H. 373.—McCabe—Osteopathy. March 15, Efficiency and Economy (Sonneman). March 22, Hearings March 22, April 5, April 6. Opposed.

H. 552.—Weise—Provides for registration of all births, still-births and deaths with the State. March 30, Uniform Laws Committee (Thon).

H. 558.—Stanfield—Amends Section 70 of the Administration Act by providing that the Physician's Bill in the last illness is claim of 1st class (now fifth class). March 30, Judiciary Committee (Watson). Recommended do pass as amended to 3rd class. April 20, 1st reading. Favored.

H. 565.—Williston—Regulates Mechanotherapy (massage). March 31, Efficiency and Economy (Sonneman). April 27, Recommendation do pass. Opposed.

H. 566.—Thon—Provides for prevention of crime by the segregation of mental defectives with criminal propensities. March 31, Judiciary Committee. April 20, 1st reading.

H. 585.—Tice—Dry Bill—Physicians' prescriptions. April 21, 2nd reading, amended.

H. 597.—LaPorte—Amends Medical Practice Act to make clear the fact that the practice of Medicine without a license (as well as the practice of Medicine and Surgery) is an offense. April 7, Judiciary Committee (Watson). (LaPorte says he introduced it at request of his State's Attorney to assist prosecution). April 21, on Judiciary calendar.

H. 618.—Lyons (by request)—Prohibits advertising which claims to cure venereal diseases, etc. April 12, Judiciary Committee (Watson).

H. 675.—Weinshenker — Amends Medical Practice Act to prevent payment of commissions by doctors to persons who recommend patients to doctors. April 21, License and Miscellany (Curran).

H. 716.—McCabe—New Osteopath Bill. April 27, License and Miscellany Committee. This is the new osteopathic bill and unless the Cook County members get busy it will be a fight, as 13 out of 23 members of the License and Miscellany Committee are Cook County men.

S. 1.—Cornwell — Exempts Optometrists (same as H. 17) from jury service. February 6, Judiciary Committee (Dailey). April 6, 3rd reading (postponed).

S. 10.—Glackin—Maternity Bill, Two mill tax. February 1, Revenue and Finance (Carlson). Opposed.

S. 134.—Glackin—Accepts benefit of Shepard-Towner Act. Appropriates \$25,000.00 for Board of Maternal and Infant Hygiene Commission. (Director of Public Health, et al). (See S. 223). March 8, Appropriation Committee (Barr). Opposed.

S. 187.—Wheeler—Counties of assessed valuation of five million may appoint a medical County Health Commissioner. (Same of H. 344 and S. 294).

S. 223.—Glackin—Directing Public Health to publish literature to protect maternity and infancy. Appropriates \$25,000.00. (See S. 134). March 22, Appropriation Committee (Barr). Opposed.

S. 270.—Spence—State Psychologist to be appointed by Governor. Salary, \$5,000.00, under supervision of Superintendent of Public Instruction. March 29, Education Committee (Spence).

S. 273.—Dailey (by request)—Clarifies Workmen's Compensation Act Repayment of necessary hospital, medical and surgical fees. March 29, Judiciary Committee (Dailey).

S. 277.—Cornwell—Regulates Mechanotherapy practice. (Same as H. 565). March 30, Judiciary (Dailey). (To amend typographical errors). April 26, 3rd reading. Opposed.

S. 294.—Wheeler—Provides a county health commissioner, nurses, etc., each county commissioner to be a licensed physician, appointed by

the Governor. March 31, Public Health Committee (Wheeler). (Same as S. 187 and H. 344). Favored. April 13, 2nd reading—*amended*. April 27, passed Senate.

S. 327.—Essington—Amends Civil Code so Board of National Resource will include a Physician and for Laboratories to study mental and physical defects. April 7, Public Health Committee (Wheeler). (Same as H. 264). April 20, 2nd reading.

S. 330.—Lantz—Directs the University of Illinois to establish an Institution of Pathology. Appropriates \$200,000.00. April 7, Appropriation (Barr). April 21, Recommended do pass.

S. 359.—Dailey — Regulates Chiropractics. April 13, Judiciary Committee (Dailey). Opposed. Second hearing, April 27, 2:30.

S. 362.—Wheeler—Unlawful for Corporation to practice medicine. Favored. April 13, Public Health (Wheeler).

S. 363.—Wheeler—Penalty for failure to give medical care (Christian Science Vs). Favored. April 13, Criminal Procedure (Sadler).

S. 405.—Glackin—Enables Chicago to provide medical care, medicine, nursing for women while child bearing and for children under one year of age. April 26, Revenue (Carlson).

DR. W. D. CHAPMAN, UNAIDED, DEFEATS MATERNITY BILL IN COMMITTEE

CIVIC FEDERATION OF CHICAGO SEES DANGER IN UPLIFT LEGISLATION

Introductory remarks by the Editor: We publish below a letter from the Civic Federation of Chicago for two reasons. First, for educational purposes; it shows that at last the public is beginning to realize that much of the so-called welfare legislation is merely sham.

Secondly, the letter is published to help encourage younger men in the profession and to help bring out the latent energy and ability that is so plentiful in the profession. What Dr. Chapman did at Springfield others may do.

THE CIVIC FEDERATION OF CHICAGO 1009 THE TEMPLE

Chicago, April 22, 1921.

Dr. W. D. Chapman,
136 Ninth Street,
Silvis, Illinois.

My dear Dr. Chapman:—May I suggest the desirability from a public standpoint of your resolving the schol-

arly address you delivered before the Revenue Committee of the Senate last week on the subject of maternity fund legislation to manuscript, so that it may be printed.

It strikes me it would be not only valuable in defeating this sort of legislation for which there is great need, but also in toning up our citizenship generally, for which there is even greater need.

Can't you urge the State Medical Society to get more publicity in the daily newspapers for their propaganda on these matters? Even if natural professional modesty and ethics kept individual physicians from sending statements to the papers, certainly there would be no impropriety in sending the Society's official publications to the various newspapers calling attention to certain articles or editorials.

If you should have any of your remarks such as you delivered before the Senate Committee published in any of your professional journals I should like very much to receive a few copies, or to be informed where I could get them if there was any expense attached, as I believe I could put them into places where they would do some good.

You will observe that I was very much impressed with what you had to say.

Yours very truly,

DOUGLAS SUTHERLAND,

Secretary.

NOTE: The Secretary of the Civic Federation informed the Editor that he went to Springfield when the maternity bill was on hearing for the purpose of speaking against it. That after Dr. Chapman's talk he considered it superfluous to do so; that Dr. Chapman had won over members of the committee who had previously been for it. That previous to the hearing of the bill in the revenue committee in the Senate a majority of the committee were for it, and that Dr. Chapman, unaided, by his clear cut, scholarly argument, won the members of the committee to a realization of the dangers of this vicious uplift scheme. He said further, that some members of the committee said openly and several privately that after hearing Dr. Chapman they could not conscientiously vote for the Glackin bill. The bill died in committee.

Dr. Chapman is a very modest and unassuming individual and in justice to him the editor desires to state that the letter from the Civic Federation of Chicago and addressed to him is published without Dr. Chapman's knowledge. The letter with permission to publish was secured from the secretary of the Civic Federation.

TAXATION WITHOUT REPRESENTATION; FEDERAL AID TO STATES DANGEROUS

WHAT THE GOVERNMENT FINANCES THE GOVERNMENT CONTROLS

THE FIFTY-FIFTY PLAN MEANS SUBSIDIZING THE
RESPECTIVE STATES, AND UNDER THE SCHEME
THE TAXPAYERS HAVE NO VOICE AS
TO THE METHOD OF DISTRIBUT-
ING THEIR OWN MONEY

WITH APOLOGIES TO KIPLING

"The General's Lady and Judy O'Grady are sisters under the skin." The Department of Agriculture has a 50-50 agreement with the State of Arkansas with relation to the Building of Roads, closely resembling the Sheppard-Towner Bill for the Building of Babies. Read how the economic independence of the State of Arkansas and its free-born American citizens are handled by the Department Secretary and ask your male patients how they relish the prospect of submitting their wives, as brood mares, to the rulings of a secretary of a Department of Public Health and Welfare, through the medium of a Maternity Center Bill; ask your female patients how they view the cattleization of women. Ask male and female voting citizens whether they will tolerate the betrayal of their self-reliance and self-respect, through the enactment of the Sheppard-Towner Maternity Center Bill, at the hands of the Congressmen from their districts or the Senators from their states. They will have a whack at one or the other of these Representatives or Mis-representatives next November.

From the *New York Times*, April 2, 1921. . . . "Secretary Wallace said that he would call for a complete report of the Arkansas situation, and from the tenor of his remarks it was plain that unless these Arkansas special district laws are changed to conform in every detail with the plans of the federal government, which means reducing the tax burden and the placing of highway control in efficient hands, that the more than \$4,000,000 of the Federal funds which have been allotted to Arkansas will remain in the government vaults here at Washington."

BLOOD PRESSURE IS NOT WHAT IT WAS FORMERLY SUPPOSED TO BE

Dr. Harold W. Dana, of Boston, formerly in charge of examinations of cardio-vascular and pulmonary organs, at Camp Greenleaf, Georgia, during the late war, in a recent article makes the broad statement that high cystolic blood pressure readings do not mean what they once meant. He declares, further, that repeated cystolic readings of 200 mm hg., may have little significance, and that we are all wrong about the value of blood pressure readings.

In the early study of blood pressure, the cystolic claimed the greater attention, and perhaps does so at the present moment, but during the last few years the diastolic pressure has been diligently studied, and we believe in the course of time will claim the major attention, so far as blood pressure is concerned. Every one realizes that there are marked fluctuations in cystolic pressure reading, even at short intervals, ranging from 10 to 75 millimeters or more. The causes for this are many, and they are, as a rule, beyond the control of the observer. Such factors as mental apprehension, worry, emotional disturbances and nervous tension may produce decided changes, and to this may be added temperature changes, previous exercise with stimulating or fatiguing results, lack of sleep, etc.

Marked fluctuations rarely occur in the diastolic pressure, the range being from 5 to 15 millimeters, rarely more than this.

NO LIMIT TO A MAXIMUM WAGE FOR THE SOCIAL WELFARE UPLIFTER

SALARIES IN FIVE FIGURES IS QUITE THE RAGE AMONG THEM

THE POOR DOCTOR IS THE YELLOW DOG WHICH IS
BEING KICKED AROUND

The following from the *Detroit Journal*, April 15, 1921, is the latest from the University of Michigan uplifters:

Grand Rapids, Mich., April 15, 1921.

CALLS DOCTORS' PRICES TOO HIGH

Declaring the medical profession must organize to meet public health needs at rates the public can afford to pay. Professor Arthur Evans Wood of the sociology department of the University of

Michigan addressed the Kent county conference of social workers on "Standards of Living."

"If the medical profession does not take this action, then we will have a state-administered health program, even as we now have a state-administered educational program," he said.

Note: The average income of the Doctors of the United States is claimed to be \$750.00 per year. These uplifters never have anything to say about the maximum wage for the social welfare workers. Salaries in five figures are quite the rage and even the littlest uplifter of the feminine persuasion scorns \$150.00 per month—talks of the standard of living—the necessity for clothes in which to appear at fashionable homes for uplift lunches, etc. The poor Doctor is the yellow houn' dog which is being kicked around.

LESS RESOLVING AND MORE ACTION NEEDED

There are about 12,500 physicians in Illinois; about 7,000 are in the State Society: if all were in the State Society and this organization a unit against vicious "welfare" measures their dignified eloquently phrased resolution of protest would be obsequiously received and expeditiously cast into the waste basket because State Medical Societies are taken seriously, only, by the State Medical Society in matters of legislation.

We are confident that all medical men who are in touch with affairs will agree with us in the following: that the sooner we medical men throw aside the mantle of professional exclusiveness and go to the people with the facts, the sooner will we begin to realize the power of medical citizenship and if we do not develop that power to its fullest we are not playing the game fairly to ourselves, our families, our people, our order, our State or the Nation.

LET YOUR CONGRESSMEN AND SENATORS KNOW WHAT SHOULD BE DONE WITH YOUR MONEY

SHEPPARD-TOWNER MATERNITY BILL

"With material modifications from its original form, the Sheppard-Towner bill which makes provision for maternity and infant welfare through Federal coöperation with the states, has been passed by the Senate. The bill appropriates \$1,480,000, of which \$10,000 is to be distributed annually to each state, and \$1,000,000 is to be used annually by the Children's Bureau. During the three days' debate on the bill in the Senate the provision for home nursing at government expense was eliminated; an

amendment was added that the member of the state advisory committees should not receive a salary, and it was stipulated that no part of the appropriation should go to any state until an amount equal to the sum to be supplied by the Federal Government had been appropriated from the state treasury."—*Journal A. M. A.*

During the discussion on the above bill the old saw was repeated, "Millions for hog cholera and boll-weevil but only hundreds for human life." These phrases by repetition become rather hackneyed and abused. If one would only stop to consider the many agencies engaged in public health work, he will ascertain that millions are used in conserving the health of the people. We feel that much of it is wasted. So many agencies, commissions and boards are engaged, their duties overlap and the people's money is not being used to the best advantage.

The Journal of the American Medical Association, in an editorial in the issue of December 25, 1920, calls attention to the fact that in public health matters, there were thirty-four independent government organizations carrying on some kind of work directly relating to public health, which, instead of being closely correlated, are scattered throughout the different departments. In the Treasury Department are the U. S. Public Health Service and War Risk Insurance Bureau. In the Department of Labor, the Children's Bureau. In the Department of Interior, the Division of School Hygiene and Physical Education of the Bureau of Education, the Indian Medical Service and the Government Hospital for the Insane. The War and Navy Departments have each their own medical service.

There are independent commissions and boards, such as the Interdepartmental Hygiene Board, the Federal Board for Vocational Training, the Bureau of Safety of the Interstate Commerce Commission and the medical service of the government printing office, that are unrelated to any of the other health agencies of the government.

In another issue of the same journal (January 8) attention is called to the fact that the House Committee on Appropriations has cut out the appropriation of \$224,924 for the Interdepartmental Social Hygiene Board, which it is said duplicates the work of the Division on Venereal Diseases of the United States Public Health Service.

The bill under consideration appropriates \$2,000,000 for the next fiscal year and for each succeeding year to 1925 \$3,600,000, and creates a Federal Board for Maternal and Infant Hygiene, and we have also the Fess-Capper Bill adding millions for physical education.

When one contemplates the various Federal boards and commissions devoted to various health problems, coupled with the energies put forth by the states, with their full and part-time health officers, health nurses, school nurses, etc., in addition to the work of the Red Cross, Anti-Tuberculosis

League and kindred associations, it seems idle talk to reiterate the charge that America pays but little to the conservation of health. The appropriation for the public health service alone is in the neighborhood of \$8,000,000. The fact is we have too many commissions and boards duplicating each other's efforts, and we fear many dollars are expended without producing tangible results. We have had some practical experience of the futility of some health work; probably it could better be expressed by saying with the theoretical and impractical work of the commissions and its inaccessibility to those most needing the care—the poor and infirm.

Of what practical value is it to tell an indigent tubercular patient what to eat, to wear, and how to provide sleeping apartments, when they have nothing with which to provide themselves with the very necessities of life? To give talks and leave beautifully illustrated pamphlets and not provide the wherewithal to procure these things?

Much of the work performed by these health organizations is of this description. What we need is not more commissions and appropriations, but a concentration of effort; fewer commissions and boards and a responsible head under which these various agencies can act without duplication of effort and work and waste of money. It seems strange that every effort calls for the creation of a new board or commission, with its usual appropriation and retinue of high-priced officials, thus leading to a multiplicity of offices and officers.

The following is clipped from the *Toledo Blade* and bears not only careful perusal but action as well, not only in national, but state affairs as well:

"Reorganization of government departments so as to eliminate duplication of work, reduce the number of civilian employes, and thus save millions of dollars each year of the taxpayer's money, is the object of a congressional committee authorized by Congress.

"In a series of six articles, of which this is the first, the *Blade's* Washington correspondent shows how, because of the manner in which boards and bureaus have been created without plan or purpose, the activities of the several departments overlap with consequent duplication of effort and the needless expenditure of millions. He warns against propaganda being spread by federal employes, some of whom must go when governmental affairs are conducted on a business-like basis.

"The proposed reorganization is one big step in the fulfillment of campaign pledges made by the Republican platform and Senator Harding to reduce Uncle Sam's payroll through retrenchment, reform and economy. To counteract the propaganda of interested officeholders, let your congressman and your senators know how you feel about what should be done with your money, the revenue of the government; for you must settle the bills.—Editor's Note."—*National Quarterly*, March 21.

THE MEDICAL PROFESSION AND THE MEDICAL ADVERTISER

Chicago has had to meet a new sort of development in medical practice during the last year in a "Public Health Institute" which has been advertising for practice extensively in the daily papers. It has confined its advertising to venereal diseases, but under its charter there seems to be no field of medical activity in which it cannot engage. We have been used to the old-style advertising doctor, who was put out of business a few years ago through the activities of the *Chicago Tribune* and other public-spirited institutions. They became convinced of his viciousness and damage to the public; he was accordingly refused access to the reputable papers, and when he could not advertise he became a problem of no importance. But this new institution is a wholly unexpected complication in medical practice. The majority of the directory of this institution are among the most prominent rich men of Chicago. Their names are being published in the advertisements of the institute, and their standing is repeatedly emphasized as evidence of the institute's high character. There is nothing about the advertisements particularly original in this field except the inclusion of these men's names in them.

The exploitation of this institute which is breaking the traditions of the medical profession against advertising is an important matter to the medical profession and one that it has a right to be concerned with. The question must be settled what the attitude of the medical profession toward this institute will be. Because of the standing of the men behind it, the attitude thus far has been one of anxious hope that they would at least change their methods. A year of experience has proved this hope to be false. We can see no good reason why the profession should take a different attitude toward this institute from that it has taken always toward advertising doctors and advertising medical institutes in general. It is making a business of the practice of medicine and it is actively seeking practice by extensive advertising. It may be, and we believe it is true, that the rich men who are backing it did not start it as a money-making enterprise. But the institute was incorporated for profit; it is using intensive methods of advertising to build up practice; it is doubtless making money, and its directors are thus introducing again in Chicago the advertising specialists in the practice of medicine. They will doubtless use the income from this practice in any way they please. The fact that they may use it for what they think are altruistic purposes does not in any way lessen the objection that they are competing for medical practice with methods which reputable physicians will not use.

A persistent effort has been made by many

physicians to make the directors see the harm that they are doing in the demoralization of the wholesome traditions of the profession which such an advertising institute, sponsored by such men, produces. Their year-long course of advertising indicates that they do not propose to pay attention to our advice on this subject and that they propose to go ahead in opposition to the medical profession. Certainly they can get practice by advertising in the daily papers, for they have no competition in this course. Apparently the greatest difficulty they have had has been in getting doctors to do their work. On one occasion, in an interview with a group of physicians, their medical director refused to give the names of the doctors who were working in the institute. Although they advertise "a complete laboratory service" they seem to have been getting their laboratory work done one time by one person and at another time by another. They have advertised for assistants. We are informed that they have made numerous efforts to get medical men to come to work for them. They are also finding occasion to send genito-urinary patients out for expert service, although if they have the experts that they advertise the occasion for this seems difficult to understand. They have broached the subject of getting their genito-urinary cases into at least one hospital. Altogether, therefore, it is evident that they are finding difficulty in getting reputable medical men to furnish the medical service they advertise that they are giving.

It is to the lasting credit of our young doctors, many of whom have come back from the war hard up, that this institution has not been able to get them to work for it. No doctor, no matter how hard up he is, can afford, if he has any professional ambitions, to go into the ranks of the medical advertisers. He had better abandon medicine entirely and go into some other occupation where he can have the respect of his colleagues. A man cannot be happy in a profession and have the contempt of his colleagues; and the medical advertiser has the contempt of the profession that the man deserves who will not "play fair" in any other competition. He does not live up to the rules of the game; he is like the man who hits below the belt, or betters his lie in golf, or takes any other advantage against accepted rules in a competition. He gains temporary advantage, but he ultimately gains a reputation that he can never live down.

The directors of the Public Health Institute evidently propose to pursue their own course. The only thing for us to do, then, is to let it pursue it alone. Certainly doctors who have any desire of maintaining a reputable standing among their colleagues cannot afford to jeopardize it by associating themselves in any way with anybody which is seeking pay medical practice through advertising.—*Bulletin of Chicago Medical Society*, April 2, 1921.

MEDICINE MUST SHAKE OFF ITS FALSE LEADERSHIP OR BE BOLSHEVIZED.

COMPULSORY HEALTH INSURANCE: A NATURAL REACTION

We wonder whether it has occurred to the rank and file of the medical profession to remark the ominous silence maintained by the *Journal of the A. M. A.* and its State satellites throughout the country on the subject of compulsory health insurance. It is really nothing less than extraordinary. Here is one of the most vital and pressing problems that the medical fraternity of this country has ever had to face, carrying with it, in the opinion of almost every physician, a direct menace to the welfare of the profession, clamoring at the very door for solution—yet, so far as the editorial utterances of the official organ of American medicine is concerned, the question might have to do with a situation on Mars. What is the explanation?

We suspect we can make a pretty close guess at the reason for this extraordinary state of affairs. The shrewd politicians who control the policies of the American Medical Association and its official organ recognize perfectly well a truth which the unthinking body of general practitioners unfortunately do not perceive, and which we propose (distasteful as the task may be) to point out to them. It is this. For several years the medical profession, through the policies and acts of these political leaders, has been put in the position of urging upon public opinions, by every kind of propaganda, its function of "benevolent paternalism" toward the people. Under color of this propaganda the medico-politicians have been able to put across their ambitious schemes of aggrandizement and power, capturing legislatures and police powers, caring little about the ultimate effect of their reckless course upon the profession at large.

It can scarcely be wondered at if the public at length took medicine at its word. The proposal to "bolshevize" the medical profession, as its members indignantly characterize it, by foisting upon it, willy nilly, a system of compulsory medical attendance on government-insured citizens, is nothing but an acceptance, on the part

of modern paternalistic government, of medicine's own appraisal of itself. Every act of usurpation on the part of the medical politicians has been justified by the specious assertion, "We are public servants—our aim is one of benevolent paternalism." And the reply of a paternalistic government is the compulsory health insurance bill.

Physicians, as a whole, do not realize this. They cry out, bitterly—and, in our opinion, with good reason—against the socializing (or Prussianizing—there is not much difference between the two forms of slavery at bottom) of their calling. They do not understand why their protests are received with raised eyebrows and polite incredulity. Still less do they understand why their indignant outcries leave their own organized leaders cold and impassive. The reason is very plain. Their leaders perceive that a protest from them would hardly be consistent with the propaganda which they have diligently promulgated for the past twenty or twenty-five years in the furtherance of their own monopolistic schemes—which schemes, moreover, they probably do not propose to forego or endanger for the sake of any sentimental consideration for the economic interests of the rank and file of the medical fraternity. Compulsory insurance will not hurt the medical politicians or their immediate circle, or anybody that might be likely to be dangerous to them.

We sympathize very keenly with the profession in its fight against compulsory health insurance. However, much as we dislike the role of the friend who says, "I told you so," we cannot refrain from reminding our readers that we have continually warned the profession, in these pages, that the acts of usurpation and Prussianization which their political leaders were perpetrating in their name, and under color of their sanction, would ultimately bring reactionary consequences on the head of organized medicine from which the rank and file would suffer. If medicine is to make an effective and successful protest against being Bolshevized herself, she must first shake off her false leadership and free her skirts of the sin of Bolshevizing everybody and everything else.—*Medical Brief*, St. Louis, Mo. March, 1921.

THE LEGISLATIVE HEARING ON THE NEW YORK HEALTH CENTRE BILL.

NO REPRESENTATIVE OF THE RURAL COMMUNITIES FOR WHOSE BENEFIT THIS MEASURE WAS OSTENSIBLY OFFERED, APPEARED AT THE HEARING TO SPONSOR IT.

At the hearing on the Health Centre bill before the Finance Committee of the Senate at Albany on March 30, the measure was opposed by representatives of the Professional Guild of Kings and Queens Counties, the Physicians' Protective Association of Erie County, the New York Medical Association, the Medical Society of the State of New York and the Medical Society of the County of New York. The bill was supported by State Commissioner of Health Dr. Herman M. Biggs, a representative of the State Charities Aid Association, and a member of the State Hospital Commission. No representative of the rural communities, for whose benefit this measure was ostensibly offered, appeared to advocate it, but an ex-member of the Assembly from Ontario County appeared in opposition to it as not demanded by conditions among those whom he formerly represented. Dr. Biggs presented a number of maps showing the devastated areas throughout the State which had been denuded of the practitioners formerly ministering to these sections and which the health centres were expected to repopulate if they were established. Some opposition was expressed to the methods employed by the health authorities to advertise their health campaigns. Another objection was that New York City, though benefiting in no way from this legislation, would be taxed for one-half of the whole amount expended for health centres throughout the State. It was the consensus of opinion at the end of the hearing that the bill would not be reported out of committee.

PENNSYLVANIA LEGISLATURE HAS A BILL BEFORE IT TO SAVE SMALL MEDICAL SCHOOLS.

A bill was introduced into the Pennsylvania Legislature, on March 17, which has for its object to prevent so-called discrimination against medical schools not connected with universities. The measure amends the act creating a bureau of medical education and licensure of the Department of Public Instruction by providing that the rules of the board shall not provide for any different or higher standards for medical educational institutions than those provided for by the Pennsylvania statutes.

VALID OBJECTIONS TO THE CREATION OF A CHIROPRACTIC BOARD

In connection with the efforts now being put forth to secure a special licensing board for the chiropractors, the secretary to the Indiana State Board of Registration and Examination has sent to each member of the Indiana legislature a letter containing some very valid objections to the plan proposed by the chiropractors. In this letter the enactment of a law creating a new board composed exclusively of chiro-

practicers, for the purpose of examining and licensing doctors who practice the healing art according to the chiropractic method, is considered unwarranted and unnecessary for the following reasons:

"First: Because chiropractor doctors and all others who comply with the pre-medical and the medical educational requirements of the present law are now entitled to license—see reports of 1919-1920 of State Board of Medical Registration and Examination. Uniformity in educational requirements is the essence of the law and a special board for the chiropractors would constitute class legislation.

"Second: The enactment of such a law will not only create another and unnecessary board, but will establish a precedent which will result in other healing sects, of which there are many, also demanding special concessions and boards of *their particular faith and kind*. I herewith quote that provision of the act which defines what shall constitute the practice of medicine within the meaning of the law: 'To open an office for such a purpose or to announce to the public in any way, a readiness to practice medicine in any county of the state, or to prescribe for, or to give surgical assistance to, or to heal, cure or relieve, or to attempt to heal, cure or relieve those suffering from injury or deformity, or disease of mind or body, or to advertise or to announce to the public in any manner a readiness or ability to heal, cure or relieve those who may be suffering from injury or deformity or disease of mind or body, shall be to engage in the practice of medicine within the meaning of the law.'

"The courts of this and other states have held that it is the *thing done*, and *not the name*, that constitutes the practice of medicine within the meaning of the law. Therefore what the chiropractor doctor does in conducting *his* business is the practice of medicine as defined by law. Hence the chiropractor doctors are admitted to licensure on the same terms and conditions as are other physicians except they are not required to take an examination in *materia medica*. The enactment of a law which confers an exclusive and special privilege for any single branch of the healing art on lower educational standards than is now provided for all schools of practice, is rank class legislation, discriminatory and without justification."—*Indiana M. J.*, February, 1921.

ORGY OF MONEY SPENDING BY UPLIFTERS PATERNALISTIC LEGISLATION IS FOUNDED UPON FALSE PREMISES AND FACTS

"The House Committee on Education has voted to report favorably the so-called Smith-Towner Bill, which 'would create a department of education and authorize the expenditure of money to encourage the states in the promotion and support of education.' This is one group of four so-called bureaucratic bills, which includes the Sheppard-Towner Bill, commonly known as the maternity bill. The latter measure, already passed by the Senate and now pending before a House Committee, provides for the employment by the federal government and the states of maternity

nurses and for the establishment at public expense of maternity centers in each county. The principal object of the Smith-Towner Bill is to provide 'for physical education and instruction in the principles of health and sanitation and of providing school nurses, school dental clinics and otherwise providing physical and dental welfare.' If the bill becomes a law in its present form, a nursing center and school dental clinics will be provided in every county of the states co-operating with the federal government. Hearings are also being held by the House Committee on Education on the Fess-Capper Bill, which proposes to create a department of physical education."

The above is clipped from the *Journal of the American Medical Association*. We have elsewhere called attention to the Sheppard-Towner Bill in this issue, and the use of the hackneyed expression, "Millions for hogs, but only hundreds for humanity." If the present pace be persisted in but a few years longer, the people will be so overwhelmed with bureaus, commissions and boards they will hardly dare move without having their steps dogged by a health nurse or doctor.

In reading the above, attention is called to the duplication of effort in the Smith-Towner and Fess-Capper Bills. These appropriations must of necessity carry with them State appropriations as well, and there seems no end to this class of legislation and duplication of effort. We have at present the all-time county health officer and nurse; add to this, county nursing centers and dental clinics with that already provided, and pray tell where will the end be. We do not need this constant duplication, and so far as personal observation goes the work now performed in the rural districts accomplishes but little. Often it consists only of a call and the distribution of pamphlets, containing much information of no practical good to the needy. What is needed is less money for personnel and more for the needy. Fewer officials and more actual work.

The efforts of office philanthropists and social workers are becoming manifold, and each one with a pet theory can have it formulated into law provided he have the patience and persistence necessary. It is time for the people to check this never-ending flood of paternalistic legislation.—*National Quarterly*, March, 1921.

THE OBJECTS SOUGHT ARE ACCOMPLISHED BY EMASCULATION OF THE DOCTOR

STATE HEALTH INSURANCE

Elsewhere we publish a timely paper by President Sawyer of the American Institute of Homeopathy on the subject of state health insurance, a pernicious form of legislation that is being pressed in several state legislatures. While addressed to homeopaths, it is equally applicable to the status of Eclectic medicine, and general medicine as well. If the objects sought by the promoters of health insurance are accomplished it means the emasculation of the doctor. While it strikes most forcibly upon the value the doctor places

upon his services and increases his opportunity to make a decent living, its worst feature is the harm it will do the doctor himself and the profession he represents.

The free and independent practice of medicine gives to each individual practitioner the incentive to do and achieve. It fosters individuality. To become a mere employee of a political body limits one's capacity and his desire to do the things which under the present status has made the growth of medicine and surgery one of the marvels of the century. To plod as a follower, permitted to do so much and only so and so, and to be paid a fee fixed by the average legislative body—a body unable to appreciate the value of such work as the saving of human lives by medicine and surgery—will mean a famine in doctors. There will, of course, be plenty of men to take up the work—to keep records, to serve grudgingly until the whistle blows, to menially bend to the union's demands—but can these be called doctors?

Let the state do everything it can to safeguard the public health. There is plenty that it can do. Let it help the doctor and let the doctor help the state. But do not throttle the doctor in his efforts to do his best for mankind and for himself. Do not rob him of initiative, of individuality, of striving to attain a better and better practice of medicine. Let the state keep its hands off the legitimate practice of medicine and it will be better for the sick, the state and the doctor.

As each state has its rights so has each individual. That these rights be free from violation there must be watchfulness and protection. Only in concerted effort can the latter be obtained. Let every doctor join his state and national organization, and let all medical organizations, of whatever creed and pathy, join in a united front to see that this protection remains inviolable. It is time for the doctor to wake up and take notice; if he doesn't he will awaken some morning to find himself shorn of his rights and the means of livelihood which have been gained by himself and cheerfully granted by truly grateful patients in the exercise of the most unselfish profession that the world knows today.—*National Quarterly*.

NINETEEN TWENTY A RECORD HEALTH YEAR

Nineteen twenty has apparently been the best year in the sanitary history of the United States and Canada, if we are to be guided by the remarkably low mortality rate among the more than sixteen million policyholders in the several departments of the Metropolitan Life Insurance Company. The figures of mortality among this insured group have proved to be very accurate indices of the health situation of the general population. Among wage-earners insured in the Industrial Department of the Company, the death rate was only 9.7 per 1,000. This was 9 per cent less than the death rate of 1919 and 23 per cent lower than the mortality record of 1911. The

year has closed a decade of remarkable progress in the field of life saving.

FEWER DEATHS FROM TUBERCULOSIS, INFLUENZA, PNEUMONIA AND ACCIDENTS IN THE METROPOLITAN LIFE INSURANCE COMPANY

Marked declines in the mortality from tuberculosis, influenza and pneumonia, and accidents were chiefly responsible for the improvement noted in the total mortality. Tuberculosis, which caused 13.9 per cent of the deaths in 1920 showed a death rate 14 per cent less than in 1919 and 40 per cent less than in 1911. A reduction of two-fifths in the rate of tuberculosis in a period of nine years means a very considerable addition to the life span of the working population of the United States and Canada. No other record of life saving is quite so striking as this accomplishment of the past decade. It can safely be said that these developments in the control of tuberculosis have resulted from the campaign of education and nursing conducted by the Metropolitan for its policyholders, from the efforts of the anti-tuberculosis movement of the past twenty-five years, from the improved economic and living conditions among the industrial group of the population, and in a measure, perhaps, from the outdoor life of the millions of men inducted into military activities in recent years.

Mortality from influenza-pneumonia was 27 per cent lower in 1920 than in 1919, despite the sharp return of the disease in the early months of the year. The mortality from all accidents was one-fourth lower than in 1911 and 10 per cent less than in 1919. Burns, drownings, falls and railroad accidents each showed lower death rates in 1920 than in preceding years. This favorable aspect of the accident record is, perhaps, the result of the modern safety movement. Engineering applied to the protection of life in industry, education directed at the reduction of accidents in the home and in the use of public transportation facilities, are bringing results which can be expressed in terms of longer life for the population.

IS MARRIAGE BETWEEN BLOOD RELATIVES DETRIMENTAL?

There are three medical problems today concerning marriage that are up for discussion and solution and legislation. One is definite data of the harmful results of consanguineous marriages. Another is the enactment of laws requiring health certificates before marriage. A third is eugenical marriage.

The literature on the subject of marriage of blood relatives is very extensive. Taken by and large, those of the "affirmative side of the question" are possibly more numerous—that such marriage is harmful. Yet the volume of definite scientific knowledge concerning consanguineous marriages has been and is very meager. It seems little statistical knowledge

has been disseminated from our institutions where we would naturally look for totals and percentages

A broad and safe foundation for opposition to such marriage does not as yet exist, at least not enough to be conclusive. So that the question is by no means finally solved. The reasons for this state of things are: 1. It is a difficult question and very complicated. 2. It has never been impartially examined into. (Always there enters in, and equally great, the hereditary advantage of transmitting as well the better, superior qualities.) 3. The influences on the germ plasma "can only be inherited through a series of generations."

However, one commonly appreciated fact concerning marriages among those of blood relation is pretty well established, and that is it aggravates the effects of heredity; but whether it be for better or worse remains to be solved.

The percentage of those who are hereditarily predisposed is, in the insane whose parents were consanguineous, more than twice the percentage in the non-consanguineous marriages. Undoubtedly blood marriage favorably influences the predisposition to insanity in the offspring. Further than this, as to definite moral qualities involved, the general practitioner may not be able to align himself. However, generally considered, he must dissuade against the mixing of like bloods, for possible insanity is a sufficient bar to marriage.

Exception: Now the family doctor, in being brought face to face with a decision of the question may except those relatives in whom there is freedom from any hereditary predisposition.

When we turn to the statistics and studies in the field of animal husbandry we get an answer at once to our question—no farmer would inbreed his stock! And yet that same farmer will come to his family doctor and ask as to the advisability of his boy marrying his cousin. We may tell him we will take the matter under advisement and look up the statistics and tables and percentages; and when we try to do so we find very little available in the archives.

The inbreeding of human beings does not "stand on the same plane as these of breeding experiments (of stock) because they comprise only a single union between related germinal cells. The collective investigations by interested physicians . . . have given contradictory results!"

In Italy "marriages between cousins do not require there any dispensation," which would exclude itself as being of any value as there are no records. What, then, is the effect on that race? No answer.

In France, in forty-three years there were 126,945 marriages between blood relations. From 1866 to 1871, 12 out of 1,000 marriages were consanguineous. Of the congenitally blind, 5 per cent of 340 cases was due to consanguineous marriages, it is stated. Of retinitis pigmentosa in the blind, 18 per cent was due to consanguineous marriages, according to the reporters. That's about the extent.—*Medical World*.

CHIROPRACTORS IN CALIFORNIA WILL REFUSE TO PAY FINES FOR LAW VIOLATIONS ASSEMBLY BILL 72

Assembly Bill 72 is the successor to the first member of "The Quack Quartet" which became familiar as number 5 on the November ballot. Although the forces behind it were routed by the people in 46 counties of California they have reassembled their defeated troops and are once more desperately attacking the laws.

It is proper to inquire as to the sincerity of those who clamor for medical freedom and denounce and defy the Board of Examiners now established by law and at the same time seek to establish a similar board that shall have the right "to examine applicants and to issue and revoke licenses to practice chiropractic—and make it *unlawful* for any person to practice chiropractic without a license—and make it the duty of the several district attorneys of this state to prosecute all persons charged with the violation of the provisions of this (Assembly Bill 72) act."

Instead of medical freedom it is obvious to anyone that analyzes the aggressive tactics of this noisy political chiropractic group that they are striving to set up a supervisory board of their own to exercise the power of selection and elimination, to decide who shall and who shall not be admitted to the charmed chiropractic circle.

It is pertinent to inquire why those who now defy established laws believe others should be prosecuted for violating laws they seek to establish? The incongruous conduct of the chiropractors suggests unpleasant questions.

The Progressive Chiropractors' Association of Southern California has announced that it is making a house to house canvass in favor of Assembly Bill 72. Griffith Jones of Los Angeles, who is managing the campaign, asserts that all chiropractors convicted of violating the state medical practice act will refuse to pay the fine or to receive a suspended jail sentence and will go to jail as a protest.

Parades, advertising appeals, telegrams, testimonials, fasting are all parts of this protest and aimed to produce an immediate effect on the legislature. They are vainly trying to make the ordinary course of justice appear oppressive.

To any legislator who considers the motives and methods of the proponents of Assembly Bill 72, and who sincerely believes in law enforcement, this attempt of law-defying chiropractors to make a mockery of present laws, in order to become a law unto themselves, will not appeal. At this time, when it is claimed that we have more boards and commissions than the public needs, to create another board to perform functions that are fully and fairly performed by the present board, seems needless waste. The people decided this question on November 2, 1920, after a state-wide campaign in which all the evidence now offered was submitted, so let's have done with it, until it is re-submitted to and rejected by the people.—*Calif. S. J. of M.*, March, 1921.

ADJUSTING SPINES AS A METHOD OF SECURING SPECIAL MEDICAL LEGISLATION A SPINE-ADJUSTED LEGISLATURE

The controversy between the chiropractors and the sanipractors, rivals in the field of drugless healing, which has been in progress for the last fifty days before the Washington legislature, has developed something new in lobbying. Instead of using persuasive arguments and convincing logic the drugless lobbyists have adjusted the spines of most of the legislators. Boosters for one or the other schools of healing have steered legislators to rooms at the leading hotel, where deft spine mechanics have relieved so-called dislocations, subluxations and nerve impingements which were hitherto undetected and unsuspected by the "patients." The attractive feature of the drugless treatments was that they were free. It did not matter that many who succumbed to the sales talks of the boosters were in perfect health before their spines were surveyed and straightened; they went amiably to the adjusting rooms under the belief that it might do some good anyway. Others, prompted by the talks of the chiropractic and sanipractic runners, discovered aches and pains of mysterious origin which were soothed away by the vigorous manipulation of their vertebrae. Social parties, where in ordinary times there would be provided song and the usual forms of entertainment, were changed into drugless clinics. One by one the guests would be taken into adjoining rooms and "adjusted." Altogether the 1921 session of the Washington legislature is the most thoroughly "adjusted" legislative body in the world. It is a form of lobbying most difficult to compete with and would be excessively funny, were it not for the fact that the practice has much to do with the shaping of our laws. The closing of the legislative session may well be looked forward to as "The End of a Perfect Daze."—*Northwest Medicine*, March, 1921.

THE FINAL ATTEMPT TO GET THE GOAT OF THE DOCTORS—MEDICAL LEGISLATION IN OREGON

The Oregon legislature adjourned last month without passing any legislation hostile to the medical profession, although several bills of interest were introduced and considered. These were all Senate bills and were sponsored by a group of legislators from Multnomah county. The bill creating a board of examiners for chiropodists passed the senate. It was so thoroughly amended by the House Committee on Medicine and Pharmacy that all its objectionable features were removed. A Senate bill creating a board of examiners for drugless healers, granting them power to do minor surgery and obstetrics, was reported favorably by the Committee on Medicine, Dentistry and Pharmacy, a majority of which fathered all bills of this character. While it passed the senate by a small majority, it was referred to the House Committee on Health and Public Morals, after its supporters were advised of the adverse report from the

Committee on Medicine, where the former committee rendered a four to one vote against it and the House defeated it by a decided majority. When the senate bill "amending the present chiropractic law" was introduced which would grant these drugless healers all the rights held by practicing physicians, the same Multnomah county clique reported it favorably. It passed the Senate by a bare majority, was reconsidered and sent back to the committee, and on its second consideration in the Senate was defeated. The same measure which was defeated in the November election was introduced in the senate, "requiring that inoculation or vaccination should not be necessary for admission to schools or educational institutions." This was killed in committee. The final attempt to get the goat of the doctors, and largely backed by the christian scientists, provided "that all prescriptions should be written in English; they should be written in triplicate and should contain the patient's name and address, a concise statement of the disease and the exact symptoms for which it was given." This interesting though absurd proposition was beaten in the Senate committee.—*Northwest Medicine*, March, 1921.

WE RECEIVED A RUDE AWAKENING BY THE OSTEOPATHIC BILL—THE LATE OSTEOPATHIC BILL

The Minnesota legislature was only one of several state legislatures which had to consider granting the osteopaths the right to practice major surgery. We have every reason to believe that the question will be raised in the next legislature.

Osteopathy, founded upon an empirical assumption as to the cause of disease, has gradually broadened the scope, not only of its training in the fundamental medical sciences, but in its therapeutic activities. When an osteopath wants to do major surgery, however, and place the public at the mercy of doctors with much poorer qualifications than the average graduate of the medical schools (and every physician knows these are meager enough), it is up to the medical profession and all others informed, to act for the welfare of the public.

This bill was obviously a short-cut to surgery and if passed, osteopathy would have attracted a certain type of man who is constantly on the lookout for short-cuts and the chance to get something cheap.

The remedy for what promises to be a continual tilt between medical sects, lies in the establishment of standard requirements for those practicing the healing art, be he surgeon, physician, dentist, osteopath, chiropractor or chiropodist. If an osteopath wishes to be a surgeon, let him meet the requirements.

Dean Lyon of the Minnesota Medical School, has called attention to the practicability of the State Board of Education passing on the eligibility in the fundamental sciences of candidates desiring to practice the healing art. Or, in Minnesota, where we have just one medical school, he believes the university may logically exert this function.

The soporific conditions of the State Medical Asso-

ciation, induced by the recommendations of the last legislative committee, received a rude awakening by the osteopathic bill. Some constructive legislation by the profession is in order to prevent a repetition of this recent experience with such dangerous legislation.—*Minnesota Medicine*, March, 1921.

HE IS STEEPED IN MEDICAL ETHICS—THE HOLY ROLLER IN MEDICINE

"Here is a part of a letter I received the other day: 'I would be interested to hear whether you have had any experience with the "Holy Roller" in Medicine—the self-satisfied, complacent physician who thinks it is not necessary for him to be interested in his brother practitioners, so long as he himself is at the top of the heap.'

"Now I have had a good deal of experience with men of this type, and I could give you the addresses of a good many of them. Before I made my pile and stopped practicing they used to annoy me a good deal, and now my young friends come to me with accounts of them that arouse my feelings and give me a good deal of food for reflection. They constitute a peculiar sect loosely bound together, not recognizing one another, having no definite organization, but the single fundamental principle,—an extreme devotion to 'Medical Ethics.' Whenever you meet a man whose long suit is medical ethics, you want to look out, for you will in all probability soon find that he belongs to the sect.

"Medical ethics is a good thing just like purgatives are good things; just like religion is a good thing; just like reformers are good things. They all help to keep us clean—purge and purify us. But anybody with worldly experience knows that it is a bad thing to purge too much, and has found out that the overzealous religionist and reformer is a troublesome and sometimes dangerous kind of fanatic, the basis of whose seeming altruistic actions is too apt to be pride or egotism, whose conduct is hypocritical, and whose expressions are cant.

"The real hero doesn't know that he is a hero, and sometimes can't be made to believe it; the really religious man is so devoted to the service of God and man that he has little time to talk about religion; the really good man forgets all about being bad, and it never occurs to him that he is good.

"Don't misunderstand me, I believe that the Ten Commandments and the Golden Rule and the Civil Code are good and necessary things that people ought to learn, and I believe that the profession ought to learn the Code of Ethics of the American Medical Association, of which we all approve and ought to practice. If we all did, it would greatly simplify our relationships and obligations. But the Holy Roller does not do this; he is intent upon making the other fellow do it, and in his hands the Code of Ethics becomes a source of revenue to him and a source of impoverishment to his associates.

"Dr. Brown, of Pleasant,—I think you know him—is one of the best educated young men in the pro-

fession. I have followed his whole medical education and it is one of the best. He is getting himself established, but he has been greatly retarded through the actions of a Holy Roller in Worthing. Now Brown's father is a farmer and raises turkeys, and Dr. White of Worthing is a good friend of Brown's and wanted two turkeys for his Christmas dinner, so he wrote to Brown to order them sent to him. As Brown was indebted to White, the father had the fowls dressed and shipped, but sent a card with 'Merry Christmas' on it instead of a bill. In January Brown had a patient who asked him to see Dr. White in consultation about his case, and together they went to Worthing. At the close of the consultation White asked for the bill for the turkeys, and was told that they were a Christmas present. He was pleased, and said so, but added that business is business, and that he was not willing to accept for a present turkeys that he had ordered. Against the young man's protestations he therefore sat down and wrote a check for five dollars, and forced it upon Brown.

"Now it happened that Brown, when leaving the hospital in which he had been an interne sometime before, in order to equip himself with the necessary instruments with which to start practice, had borrowed some money from Dr. Black of the same city. Black was very willing to lend him the money at six per cent, the return to be made on installments at Brown's convenience. Having some money in hand, Brown went to Black's office to make a payment, taking the patient, who, by the way, had early exophthalmic goitre, with him.

"Leaving the patient in the waiting room, Brown went in to see the doctor, had a chat with him, and paid the money, including with it the small check that he had just received from White, thinking it better to owe the money to his father at no interest than to continue to owe it to Black at six per cent. Black asked a great many questions, and in the course of the conversation found out that Brown had been to see White with the patient, and that White had just given him the check. Brown had some errands to do, and as Black's office is quite close to the railroad station, asked permission to let the patient sit in his office until train time when he would return.

"Now Black is a great stickler for medical ethics, and is a typical Holy Roller. As soon as Brown had gone, he sat down and began to put two and two together, until he had made out a clear case of fee-splitting against Dr. White. What better evidence could he possibly have? Here was young Brown with a patient, just from White's office, and with a check on which the ink was hardly dry. It was a terrible case, and there was no doubt but that White ought to be run out of the County Medical Society and Brown warned against such conduct. After a while he went into the waiting room, and began to talk to the patient, from whom he found out what was the matter, and all that Dr. White had said. In the course of the conversation he made it plain to the patient that he was now very fortunate as in

addition to the advice of Dr. White for which he had come to town, he was also gratuitously securing his own. Brown and White had agreed that the case was one that did not require operation, and in which rest, care and careful diatetic treatment might effect a cure. Black, who soon had the patient under his influence, gave him to understand that the only result of the treatment about to be instituted would be that he would be kept in bed for a long time to no purpose and in the end would require operation after all, but that he could at once effect a cure by operation. To all this the patient listened, and he and Black came to understand one another so well that when Brown came back, and they had started home together, he told Brown that he had concluded to undergo operation. Brown was not very averse to the proposal, and said he would notify White, and have a room in the hospital secured for him. He was, as you may imagine, much surprised when the patient told him that as Dr. Black was the one who gave him this advice, he intended to have him do the operation. The whole story of the voluntary consultation then came out, much to Brown's disgust, and he gave up the case. The operation was done, and before a year was out Black had not only operated upon the goitre, but also had removed the appendix of the patient's wife, and had taken to himself the conduct of his father's case of diabetes, thus actually taking the whole family from Brown. In addition to this Brown received a very severe letter warning him against the pernicious habit of fee-splitting, and White had to defend himself against charges of fee-splitting, and has pretty nearly lost his reputation because of the persistent statements of Black that he does split fees, as he has with his own eyes seen the check given by White to a physician who had brought him a case.

"Now you see, Black is a typical Holy Roller. He is steeped in Medical Ethics. In every society to which he belongs, he has himself appointed on whatever committees have to do with ethics or discipline. Very slick? I should say so. He never splits fees—it isn't necessary. There are other ways if you only look for them. He makes a lot of money, and not a little of it comes out of Medical Ethics. Oh, yes, 'Medical Ethics' are great. Black wouldn't for a minute be without them."—*Pen. M. J.*, March, 1921.

SPONTANEOUS CURE OF CANCER

DR. FRED J. TAUSSIG.

Medical literature records a considerable number of spontaneously cured cancers. In general, pathologists have accepted this as possible, although Von Hanse-mann denies this possibility, except in the case of chorio-epithelioma.

The case reported by the author was first seen June 6, 1909. At that time she had an inoperable cancer of the cervix with a large crater. In the course of an excochleation done a few days later, the peritoneal cavity was accidentally opened and it was decided to remove the uterus in order to provide better drainage.

This was done leaving evident carcinoma behind. The patient recovered and three months later was subjected to an exploratory laparotomy. Enlarged lymph glands were found in the pelvis, especially one the size of a walnut, a portion of which was excised and found to contain carcinoma. This lymph gland was too adherent to the iliac vessels to be removed. The tubes and ovaries, together with a small amount of surrounding cellular tissue was removed at the time of this operation. The patient was again seen October 15, 1920, over eleven years after this second operation, in perfect health, showing no evidence of carcinoma in the pelvis. An additional feature of this case was that there was also present an early carcinoma beginning at the edge of a condyloma acuminata hanging from the urethral meatus. This was excised at the time of the hysterectomy.

The author in conclusion analyzes the factors that may produce spontaneous cure of cancer. He is engaged in studies of the blood of this patient and the effects of her blood serum on other patients.

DISCUSSION

Dr. Clopton: About twelve years ago I operated on a boy with adenocarcinoma of the thyroid. The cancer grew in between the rings of the trachea and the glands of neck were involved. As I hadn't supposed that there was a carcinoma of the thyroid we did not have permission to do a complete laryngectomy, and we were forced to leave this growth in place, but he went home to his father who was a doctor. Later on it was suggested that we do a complete operation. The father objected to this. The boy got such Roentgen-ray treatment as was possible at that time. He is alive today and has had no return of symptoms. This I think was a case of retrogression, as it was some time after the operation before he got Roentgen-ray treatment.—*J. M. S. M. S.*, March, 1921.

ON PROFESSIONALISM, IDEALISM AND LABOR UNIONS.

St. Louis, March 25, 1920.

To the Editor: Several medical journals have recently published the disquieting statement that the physicians of England were contemplating affiliating with the labor organizations of that country on account of the recent health legislation that has been enacted, which has reduced the medical fee in England to a mere pittance. Inasmuch as this inclination seems to assume the aspect of an obsession in the professional and educational world today, the situation should be worthy of analysis, and the procedure either made justifiable or else utterly condemned. St. Louisians are particularly interested at the present moment, since the question is now being vividly agitated in their public school system.

There is an ancient eastern maxim: He who steals a lion cub from a lioness stands in less danger than he who seeks to separate an illusion from its possessor—which is as it should be, according to our conception of things idealistic. It is comforting to know that while the agitation and turmoil anent professions

and labor unions are waxing hot, yet those engaged in the ebullition are by far in the minority. Take away the illusive idealism of the physician and educator and what have we left but a prosaic personage, strictly concrete and matter-of-fact. The economic world today is getting a sample of what happens when the idealist is separated from his illusions. They at once seek their due, not in the abstract, but in cold standard value.

Without delving into the evolution of unionism, it may safely be asserted that while unions have been based on logical and laudable conceptions, they have, unfortunately, only too often manifested the desire to evince the strength which is engendered through union, while a docile public has timidly stood by and then paid the cost of viewing the burlesque with their hard earned dollars. By even harboring the idea of merging with labor unions, professionalism is at once stultifying itself in the eyes of what is today fast becoming an analytical public; because it thereby tacitly admits that it is unable to attain its desired ends without having recourse to the big stick of unionism. If educators and physicians are the most underpaid individuals today, they have no one to censure but themselves, since they have evidently been content to meander along in the self-satisfaction, attending their idealistic pursuits. The flotsam and jetsam following in the wake of the recent upheaval having upset economic conditions to an alarming extent, has brought the educator to a sudden realization of the semi-idealism in which he has been subsisting, and presto! the pendulum swings to the other extreme and we find him making overtures to the labor unions, or rather listening to the mephitic smile and alluring promises that would beguile him from his visionary paths.

Professionalism can never logically merge with labor unionism, for the very manifest reason that in no portion of the universe do we find the transcendental merging with the material for a permanent period to form a distinct entity. True, the finite and infinite are linked to form what we term life; yet there is nothing in common between the two. The concrete body performs its functions during our mundane period and then through physical corruption vanishes into its source, the elements. The spirit presumably does likewise. Of the link which binds the two, we know nothing.

WILLIAM H. THALER, M. D.,
Missouri Med. Journal.

PERNICIOUS VOMITING OF PREGNANCY CURED BY ADRENALIN. Rathery and Bordet (*Bull. d. l. Soc. Med. des Hôpitaux*, Paris, June 4, 1920.)

Vomiting began suddenly a month after the last menstruation with no warning. Patient was 22 years old, had menstruated regularly since 11. In two months she had lost nearly half her weight. Face haggard, eyes sunken, boat shaped abdomen, skin hanging in folds, profound apathy, normal temperature, pulse 96, soft, blood pressure 95. Treatment 250 ccm of physiological serum, with 10 drops of

adrenalin given subcutaneously. During the next day she only vomited once during the night. One mmg. of adrenalin was given in 250 ccm of physiological serum. A Murphy drip of glucose 40-100 was given twice with 20 drops of adrenalin. The third day the appearance of the patient had markedly changed. No more vomiting, abdomen not so sunken, patient hungry. The next day the adrenalin 20 drops was given by mouth. In ten days she gained 18 pounds, was able to eat and the adrenalin was discontinued.

Correspondence

UTAH COPIES ILLINOIS MEDICAL LAW KILLS OFF ALL VICIOUS MEDICAL LEGISLATION

Salt Lake City, Utah, March 22, 1921.

To Dr. John R. Neal, Chairman,
Legislative Committee,
Springfield, Illinois.

Dear Doctor:—

The Utah Legislature has adjourned. It was very liberal in passing medical legislation, every measure the committee on Public Policy and Legislation of the State Society opposed failed of passage and our own medical practice act passed and has been signed by the Governor (Senate Bill 16).

Our Medical Practice Act was modeled after the Illinois law and we believe is one of the best Medical Practice Acts in any of the States. It passed the Senate by vote of 16 to 2 and the House by vote of 30 to 12, with only one slight amendment which will in no way injure the bill.

Three different Chiropractic bills were introduced and all failed of passage. One Osteopathic Bill was introduced into the Senate and it also failed. The Chiropractors then got a bill introduced in the Senate which would have provided that no injunction could be issued against anyone for violation of the Medical Practice Act and that trial by jury may be asked for and granted. The Senator who introduced this Bill, after being convinced it was a vicious form of legislation recalled it and nothing more was heard of it.

Senate Bill 19 provided for a one man Industrial Commission with power to hire and regulate their employees including medical men as were deemed advisable. This bill was the work of Insurance Companies and was very favorable to them in every way. It was strongly op-

posed by our committee and was killed in the Senate.

Yours sincerely,
William L. Rich, Secretary
Utah State Medical Society.

ROCK ISLAND COUNTY, ILLINOIS, HAS THE RIGHT SYSTEM

The Moline Community Service Council apparently thinks their community is sadly in need of various forms of relief and has appointed committees along various lines. One committee was appointed for nursing, medical and dental service, at the head of which was placed a retired graduate nurse. The medical society was then sent a form questionnaire to be filled, in which the society should state the amount and kind of assistance that it would give. Instead of filling out the questionnaire the medical society instructed its officers to send the secretary of the uplift organization the following letter:

"Moline, Ill., April 13, 1921.

"Mr. V. P. Randall, Sec'y,

"Moline Community Service Council,

"Moline, Ill.

"Dear Sir:

"The Rock Island County Medical Society at its meeting held last night directed its Secretary to reply to your communication as follows:

"The local medical profession took care of the people of this community during their prosperity and they will take care of them during their adversity; credit will be extended where credit is necessary; charity will be given where charity is indicated; God's poor we have always had with us and they have always been taken care of and will always be taken care of. The people who made good money and paid their physicians need have no fear that they will not receive services even though they are not able to pay. The county of Rock Island employs and pays physicians for the remainder. The local medical conditions have always been handled along the above lines and the people have been well served although the physicians have given no publicity to the amount of work done.

"During their prosperity the people were able to find their physicians without the aid of any organization and we feel that they will still call their regular physician now. This being the case, the Rock Island Medical Society does not

feel disposed to place the services of its members at the disposal of anyone excepting the patient and will therefore refuse to answer any call not coming from the patient or his family or friends.

"This letter is not to be construed to mean that the members of this Society will not care for indigent people, but that the method of employing a physician is to remain as heretofore.

"Yours very truly,

"G. D. HAUBERG,

"Sec. R. I. Co. Med. Soc."

STATUS OF THE CHIROPRACTIC BILL AT SPRINGFIELD

To The Editor: The Chiropractic measure, S. B. No. 359, was heard before the Judiciary Committee this afternoon (April 26), with a gallant array of the most learned looking Chiropractics imaginable, and after several "Fourth of July Orations" on their part, loudly proclaiming in no indefinite terms the fallacy of the practice of medicine as it is now conducted, and instructing the Judiciary Committee in a thorough course of Chiropractics—nevertheless their arguments were apparently unavailing and were easily met by Doctor C. E. Humiston, our President-elect, who in a very few minutes apparently won the Committee from any prejudices that the proponents of the bill attempted to overcome.

The bill now rests in the Committee, and although it is too early to say what the final disposition will be, nevertheless it is safe to say that the situation at this time is well in hand in regard to this particular measure.

Yours very truly,

DR. J. R. NEAL,

Chairman Legislative Committee.

Public Health

HEALTH PROMOTION WEEK BIG SUCCESS.

In spite of the somewhat inclement weather conditions, Health Promotion Week (April 17-23) has been a greater success this year than ever before.

The leading features of the week's program were general clean-ups, better baby conferences and birth registration. The latter is looked upon as of particular significance since it adds public approval to the plans of the State Department of Public Health to institute a relentless drive against non-registration of births until Illinois has been admitted to the United States Registration Area for Births.

The successful observance of Health Promotion Week is due in no small measure to the cooperation

and assistance that was freely given by the daily and weekly newspapers. Editors all over the state gave liberally of their space and endorsed the measure with strong and favorable comments of their own.

LEPROSY CAUSES UNDUE ALARM.

Considerable alarm and publicity was recently occasioned by the escape of a leper from quarantine in East Moline. Vigorous and earnest efforts to locate the leper were immediately instituted and isolated quarters and a special guard at the state buildings in Watertown are ready in the event of his apprehension. Smallpox and diphtheria showed a marked increase during the past winter and both diseases are positively preventable. The other common communicable diseases respond readily to control measures and should elicit much greater public concern than a case of leprosy. Leprosy is only mildly contagious in the United States.

OLD AGE NO PROTECTION AGAINST SMALLPOX.

Smallpox draws no age limit. This has been clearly demonstrated by several cases among unvaccinated persons of advanced years that have recently been reported to the State Department of Public Health. Two women of Logansport, Illinois, one 92 years old and the other 60, who had not been vaccinated since infancy, were victims. A man of 80 at Geff and one of 72 at Xenia, who had never been vaccinated, were also attacked by this loathsome disease. Reports show that smallpox has been generally more prevalent in Illinois during the past winter than previously and a corresponding increase of activities among anti-vaccinationists is indicated.

DEATH FROM TRICHINOSIS.

A death on March 18th from trichinosis was recently reported to the State Department of Public Health. The victim was a white woman, age 28, who lived at Macomb, Illinois.

The State Department of Public Health calls attention to the fact that trichinosis is a communicable disease of human beings and of hogs, rats, mice, dogs and other animals. It is caused by an organism which is barely visible to the naked eye and is transmitted to humans through the eating of infected hog flesh. Fever and muscular pain are prominent symptoms of the disease that may often be mistaken for rheumatism or typhoid fever. To prevent trichinosis in man, no hog flesh should be eaten unless thoroughly cooked.

Society Proceedings

ADAMS COUNTY

March Meeting

Call to order by President W. E. Mercer. Minutes of last meeting read and approved.

Reading of communication from A. M. A., regarding peculiar case of Miriam Rubin, which has been

the subject of a widely circulated newspaper story, and asking the society to appoint a committee to call on the local press. After due consideration it was deemed best to take no action in the matter, since such action might only serve to make matters worse.

Under new business, Dr. Wells spoke about the proposed memorial to be erected to the soldiers of all wars. This project will come before the voters at the Judicial Election in June and Dr. Wells felt it was fitting and proper for the Adams County Medical Society to be the first to endorse it and accordingly, introduce the following resolution and moved its adoption:

WHEREAS, There is now presented to the people of Quincy and Adams County a definite, concrete, and comprehensive plan for the erection of a memorial and the establishment of a county library system in honor of the soldiers and sailors of all wars who have gone forth from this county.

WHEREAS, The cost of erecting this fine memorial building is to be met by an issue of \$250,000 ten year bonds of Adams County to be paid off serially by an increase of the tax on the \$430,404,740 assessed valuation of the property in the county of approximately .75 of a mill—this amounting to 7½ cents on an average yearly on each \$100 assessed valuation; therefore, be it

Resolved, That the Adams County Medical Society warmly endorses the proposition and pledges its individual members to work for the success of the memorial proposition to be voted on at the Judicial Election to be held June 6, 1921.

Resolutions Adopted

A resolution was passed that it is the sense of this society that we go on record as being opposed to twenty-five cent a line assessment for the privilege of having names in classified list in telephone directory and that the secretary notify the members of this action.

Scientific Program—Symposium on Eye, Ear, Nose and Throat.

Dr. Ray Mercer—"Smith Technique with Fisher Modification in Cataract Operation." Report of twelve cases personally operated on. Results very good.

Dr. E. G. Boyd—"Therapeutics in Treatment of Diseases of the Ear."

Dr. J. C. Steiner—"The Nasal Accessory Sinuses; Anatomy, Pathology and Treatment."

Dr. W. P. Stevenson—"The Tonsil."

April Meeting

The Adams County Medical Society met in regular session at the Chamber of Commerce, on Monday, April 11, at about 8:30 p. m.

Dr. A. L. Garver was admitted to membership.

Reading of minutes was dispensed with and meeting turned over to Dr. W. H. Cameron of Pittsburgh, Pa., one of the pioneer radium therapists of this country and the editor of the magazine "Radium."

Dr. Cameron chose for his subject "General Conditions in the Therapeutic Application of Radium."

In this very practical, interesting, instructive, and able talk we were given the history and physics of radium and the results that have followed its application in malignant and non-malignant conditions.

In the discussion that followed the doctor was forced to give several lengthy dissertations on various phases of the subject.

The members expressed their appreciation by a rising vote of thanks.

In the afternoon Dr. Cameron conducted a clinic at Blessing Hospital, from one o'clock until six and was busy every minute of the time.

Adjourned.

Elizabeth B. Ball,
Secretary.

COLES-CUMBERLAND COUNTIES

Coles-Cumberland Medical Society met at the Chamber of Commerce, Charleston, Ill., March 30, 1921, at 6:30 p. m.

Luncheon was served, followed by call to order by the President, Dr. Richardson.

Dr. C. H. Neilson of St. Louis, Mo., discussed "Neurosis and Its Production."

Dr. Neilson mastered the subject in his easy way that made you feel you were well repaid for being there.

Dr. Hazen of Paris discussed the subject from a surgical standpoint.

Twenty-three members were present. We now have 50 members in our society.

R. H. Craig, Secy.

COOK COUNTY

CHICAGO MEDICAL SOCIETY

Regular Meeting, April 6, 1921

1. Arthroplasty of the Jaw, with Some General Remarks on Arthroplasty and Focal Infections—James M. Neff.
2. Advanced Pathological Conditions Observed in South China. (Lantern Slides.)—J. Oscar Thomson, Canton, China.

General Discussion.

Regular Meeting, April 13, 1921

A joint meeting of the Chicago Medical Society and the Chicago Gynecological Society will be held in the Marshall Field Annex Building, 6th floor, Wednesday, April 13, 1921. Phone Central 8455.

1. Physical Factors Underlying the Use of Radium and Radium Emanation—Gerald L. Wendt.
 2. Report of Cases Treated in the Gynecological Service at St. Luke's Hospital—H. O. Jones.
- Discussion—Henry Schmitz, Frank Simpson, Arthur H. Curtis.

Joint Meeting Chicago Medical and Chicago Surgical Societies, April 20, 1921

1. Treatment of Large Empyema Cavities. Demonstration of Patient—Carl Beck.

2. Is an Experienced Surgeon Ever Justified in Violating the Recognized Surgical Technique in Malignant Growths? (Lantern Slides.)—L. L. McArthur.

Discussion.

Regular Meeting, April 27, 1921

1. Infection as the Cause of Stillbirth, with Report of a Case in Detail—Edward L. Cornell.
2. Prophylaxis and Serum Treatment of Yellow Fever. (Lantern Slides.)—Hideyo Noguchi, Rockefeller Institute, New York, N. Y.

General Discussion.

CHICAGO OPHTHALMOLOGICAL SOCIETY

Meeting, November 19, 1920, Continued

DR. JACOB LIFSCHUTZ reported the following case: The case was interesting first because it showed a rather peculiar combination of lesions in one eye only and, secondly, because it showed the various pathological manifestations of one single etiologic factor, namely, lues.

The patient, a young colored man, aged 21, came to the eye clinic of the Postgraduate Hospital on the thirteenth of November. He stated that sight began to fail in his right eye eight days prior to admission. He never had had any pain before, inflammation, or any other trouble in either eye. On examination the left eye was found normal in every way, vision being 20/20. The right eye had only 20/100 vision and on ophthalmoscopic examination presented the following findings: 1. A large veil-like floater in the vitreous, the disc itself was normal. 2. A little above and to the temporal side of the disc there was an area of central choroiditis, almost the size of the disc. 3. Directly above this area was an occluded retinal vessel, which appeared like a white streak with some proliferation of connective tissue from it, showing a beginning of retinitis proliferans. 4. In the macular area there was the typical cherry red spot characteristic of retinal embolism and the area supplied by the inferior temporal branch of the central retinal artery was pale and bloodless, showing the presence of an embolism in that vessel. There was no history of lues, and no Wassermann was taken. Nevertheless this was unquestionably a case of syphilis producing an interesting variety of pathologic lesions in one eye.

DOUBLE CATARACT OPERATION

DR. WILLIAM A. FISHER presented Mrs. E., aged 76, whom he operated on both eyes for senile cataract sixteen days ago. Both eyes were bandaged nine days. She had not had any post-operative inflammation, both eyes were free from irritation and her vision was 20/50 in each eye with a plus 10. Her vision would naturally improve and if it did not reach normal, the cause could not be faulty operation. The case was presented to elicit discussion that might prove helpful. Text-books did not recommend the

double operation, but most of the objections were made by complete operators of long ago. There were many advantages in certain cases and few disadvantages. Those who did not believe it proper saw many disadvantages, while those who thought well of it saw few disadvantages. He saw many cases which he believed would have many advantages by having both eyes operated at the same time.

He had operated a large number in this manner and did not believe they had any more complications than those operated one eye at a time. The greatest objections to the double operation naturally came from those who had never operated in that manner. If the double operation could be done without more complications than singly, as it was usually done, and believed it could, it seemed to him that it should be the operation of choice in selected cases.

DISCUSSION

Dr. R. J. Tivnen stated that what the patient wanted and what was safety to give him was quite a different matter. Dr. Fisher's plan of extracting both cataracts at the same sitting was entirely against all teaching and practice. It seemed to him to be against all common sense. The essayist said one could do it without risk, but he did not think you could absolutely eliminate that possibility. Dr. Fisher said he did not have infection because he used a new set of instruments for the second eye. A new set of instruments would hardly, by any stretch of one's imagination, entirely eliminate the possibility of infection. Infection might come from within, endogenous, as well as be introduced, so one could not entirely eliminate this endogenous element. In addition, it was to be remembered that the same operator, the same assistants, the same operating room, in short, all of the usual channels of infection were present during both the operative procedures and all were possible factors in inaugurating an infective process.

No one, therefore, however skillful and painstaking, it seemed to him, could possibly wholly eliminate the danger of infection under such conditions, and if infection did occur—think of the tragedy of binocular infection following the cataract extraction. Safety first, it seemed to him, in this connection became not only a practical slogan, but an absolute obligation on the part of the doctor in discharging his full responsibility to his patient, and his positive conviction was that operating one eye at a sitting was the sensible, practical and safest procedure.

He asked Dr. Fisher whether he performed the intracapsular operation. He understood he had done 200 on both eyes at the same time.

Dr. Adams asked as to the mental attitude of the patient? Were they as quiet with the second operation as with the first?

Dr. Fisher, in closing, said he tried to remove all senile cataracts in capsule, but in this case his needle was used in both operations and both capsules ruptured and retained, which would probably require needling. The needle, however, did not rupture all capsules. He would answer Dr. Adams' question regarding the second operation by saying he would not operate the second eye unless the patient was quiet. He had usually found the patient more quiet when operating upon the second eye than the first. He did not find many patients unruly during a cataract operation unless they were hurt. Since discarding the eye specula and substituting lid hooks, he found the patients did not complain of any part of the operation.

When he was with Colonel Smith he operated 576 eyes and 200 of them were double. Records were kept and no more complications occurred with the 200 double than with the 376 single. If Smith had always operated as he did when he was with him, he must have operated at least 15,000 double and he believed there were no more complications doing them double than would occur operating singly. His record alone would seem to overshadow all objections.

MACOUPIN COUNTY

The annual meeting of the Macoupin Medical Society was held in the Commercial Club rooms Tuesday afternoon. Dr. H. P. Beirne of Quincy gave the principal address on "The Physics and Uses of Radium."

The following officers were elected: Dr. D. A. Morgan, Nilwood, president; Dr. M. Herschleder, Mt. Olive, vice-president; Dr. J. P. Denby, Carlinville, medico-legal adviser; Dr. T. D. Doan, Scottville, secretary-treasurer; Dr. T. A. Doan, delegate to state convention, and Dr. G. E. Hal, Girard, alternate.

Fifteen members from the cities of the county were present.

McLEAN COUNTY

At the regular meeting of the McLean County Medical Association held April 12 in the Illinois Hotel, Bloomington, officers were elected as follows: President, Dr. E. L. Brown, Bloomington; vice-president, Dr. William McIntosh, Colfax; secretary, Dr. Ralph Peairs, Normal; delegate to national society, Dr. E. P. Sloan; alternate, Dr. William Young. Dr. W. E. Neiberger was elected to succeed himself on the board of censors. Two new members were received into the society, Dr. May of LeRoy, and Dr. Ziegler of Farmer City.

Sixty were present at the banquet last evening. The speaker was Dr. Emmerson of Indianapolis who spoke on "Anemia."

MERCER COUNTY

Medical men of Mercer county held their annual meeting and election of officers at the Empire theater in Aledo, Tuesday afternoon. A good attendance of the doctors of the county were present.

The new officers named to serve the coming year are:

President—Dr. L. R. Louis, North Henderson.

Vice-president—Dr. Samuel Haley, Joy.

Secretary—Dr. V. A. McClanahan, Viola (reelected).

One of the topics of the meeting was that of a county nurse which will probably be placed in Mercer county by the Red Cross. It was the sentiment of the meeting that such a step would be a splendid thing for the county.

ROCK ISLAND COUNTY

The Rock Island County Medical Society at its annual meeting April 12, 1921, elected the following officers: President, B. J. Lackner of Rock Island; vice-president, F. J. Otis of Moline; second vice-president, A. E. Williams of Rock Island; secretary, G. D. Hauberg of Moline; treasurer, A. T. Leipold of Moline; medical legal adviser and legislator, W. D. Chapman of Silvis; delegate, L. Ostrom of Rock Island; alternate, J. L. Hollowbush.

Dr. Jesse R. Gerstly of Chicago addressed us, his topic being the "New Era in Pediatrics." Following Dr. Gerstly, Dr. T. W. Gillespie talked, giving us an idea of the trend of things in regard to State Medicine. The doctor's talk aroused a great deal of enthusiasm,

and as a result the physicians, dentists and druggists are having a get-together meeting in a short time to further fight the socialistic trend of the state.

Personals

The June issue of the *Medical Review of Reviews* will be a special radium number dedicated to Mme. Curie. The issue will consist exclusively of articles on radium and its uses, written by the most prominent radiologists in the United States and Canada. Copies will be sent complimentary to every physician interested in the uses of radium and any readers of this item who desire that issue may have it by asking for it from the *Medical Review of Reviews*, 51 East 59th street, New York.

Joseph Mantell died in Toronto on February 1 at the age of 111 years. He was born in England and came to Canada eighty-two years ago.

Mrs. Mary Fischer, who would have been 110 years old next May, died of old age in Chicago on February 11. She was born in Poland in May, 1811. Her faculties were clear until a few hours before death.

Dr. Chas. J. Whalen has removed to 6221 Kenmore Avenue, Chicago.

Dr. Reinhold C. Schlueter has removed to 456 West 63d Street, Chicago.

Dr. Wallace Blanchard has discontinued his active service at the Hospital for Destitute Crippled Children in connection with Rush Medical College after 27 years, being placed on the consulting Orthopedic Staff. The orthopedic clinic on Tuesday and Friday are now being conducted by Dr. E. J. Berkheiser.

Lieutenant-Colonel Henry Smith, C. I. E., I. M. S., of London, England, late of Amritsar, Punjab, India, will be the guest of the Chicago Ophthalmological Society at Chicago, May 26, 1921.

Colonel Smith will hold a surgical clinic at the Illinois Charitable Eye and Ear Infirmary (Peoria and Adams), on the afternoon of the 26th and will read a paper in the evening before the society at the Sherman House, which will be preceded by a dinner given in his honor. Members of the medical profession who are interested can communicate with the secretary.

MICHAEL GOLDENBURG, Sec.

News Items

—Students of the subject of nutrition will have extensive opportunity for work in that specialty this year. Dr. W. P. R. Emerson of Boston will conduct an institute June 13-28, under the auspices of the McCormick Memorial Fund, 6 No. Michigan avenue, Chicago.

—The University of Chicago offers two six weeks courses for training of nutrition workers with children, to begin June 21 and July 28. These courses will be in charge of Prof. Lydia J. Roberts. Dr. W. H. O. Hoffman will be medical examiner.

—The McCormick Institute for Infectious Diseases is conducting researches on the etiology of scarlet fever. Organisms isolated by Drs. George Dick and Gladys Henry Dick have been inoculated into several volunteers.

—Dr. O. W. McMichael of Chicago held a tuberculosis clinic at St. Francis hospital, Kewanee, April 5, and gave an address on "Early Diagnosis of Diseases of the Chest."

—Forty-two health centers are said to be operating in Illinois. A number of other communities employ public health nurses.

—At a community conference on public health in Jacksonville, April 3, Dr. Carl E. Black, in discussing the report of the Red Cross Survey of that city, gave an elaborate analysis of health conditions there and predicted that within ten years conditions would be greatly improved. Among the measures proposed to bring about this result were a full-time public health officer with laboratory, school medical inspection and school nursing and a public health center.

—The Kankakee Medical Society is said to have arranged for the care of the poor in the county by certain members alternating every three months.

—Dr. Edwin Lyngh, Chicago, is said to have been indicated for selling 50 grains of morphin to an addict without a prescription.

—Dr. E. D. Converse, Chicago, was arranged before Judge Landis on a charge of violation of the Harrison law.

—At the regular monthly meeting of the Galesburg Medical Society, Dr. Albert H. Byfield, professor of pediatrics at the University of Iowa, read a paper on the subject "Periodic Vomiting and Allied Affections in Childhood."

—Grundy County Medical Society, at the meet-

ing in Morris, April 7, elected the following officers: President, Dr. Paul Anthony, Morris; secretary, Dr. F. C. Bowker, Morris. Dr. H. M. Ferguson presented a portrait of the late Dr. G. T. Nelson to the society to be placed in the reception hall of Morris Hospital.

—At the meeting of the Fourth Councilor District in Peoria, April 15, Dr. Wm. J. Mayo of Rochester, Minn., gave an address on "Splenectomy and Its Relation to Blood and Liver Diseases." Dr. Edward Ochsner of Chicago discussed "State Medicine."

—The Central Illinois District Medical Association held its 45th annual meeting in Pana, April 26.

—The Association of Military Surgeons of Illinois held a meeting, April 20, to discuss a constitution and by-laws. The next meeting will take place in Springfield, May 16.

—Dr. E. D. Converse, of Chicago, was sentenced by Judge Landis, April 29, to serve fifteen months in Leavenworth for aggravated violation of the Harrison law. It is said that he wrote 340 prescriptions in 244 days for 8,000 grains of morphin for one man, besides thousands of prescriptions for morphin and cocaine for other persons.

—Dr. C. S. Williamson, of Chicago, gave an address on "Treatment of the Commoner Heart Conditions" at the meeting of Lee County Medical Society, at Dixon, April 5.

—Macon County Medical Society, at a meeting in Decatur, March 29, elected the following officers: President, Dr. M. D. Pollock; vice-president, Dr. R. L. Morris; secretary-treasurer, Dr. J. M. Hayes. Dr. C. H. Neilson of St. Louis was the principal speaker, on "The Genesis of Neurosis."

—The next meeting of the Chicago Society of Anaesthetists will be held Monday, May 23d, 8 p. m., at the Hospital Library, and Service Bureau, 22 E. Ontario, street.

PROGRAM

1. Technic of Local Anaesthesia Combined with Nitrous-Oxide—Oxygen Analgesia in Cæsarean Section—Wm. F. Hewitt, M. D.
2. A Review of Recent Literature on General Anaesthesia in Oral Surgery—A. A. Cowin, D. D. S.
3. General Discussion.

You are cordially invited to attend and to discuss papers.

Marriages

HENRY HENKIN, Chicago, to Miss Goldie A. Joffa of Minneapolis, March 15.

Deaths

CARL H. LOWELL ANDERSEN, Chicago; John A. Creighton Medical College, Omaha, 1896; aged 53; died at Tucson, Ariz., March 16, from pulmonary tuberculosis.

HEMON HAMPTON BROWN†, Chicago; University of Michigan, Ann Arbor, 1886; aged 57; formerly president of, and professor of ophthalmology in the Illinois Medical College, Chicago; formerly president of the Chicago Ophthalmological Society; died at Orlando, Fla., April 10.

WILLIAM JOSEPH COSTELLO, Chicago; Chicago College of Medicine and Surgery, 1917; aged 32; died, March 7, from acute dilatation of the heart.

ALFRED HAKANSON†, Chicago; Nebraska School of Medicine, Omaha, 1890; aged 54; laryngologist and rhinologist to Augustana Hospital, Chicago; died in Mobile, Ala., March 23, from pneumonia.

MORRIS JASPER HILL, Sterling, Ill.; Chicago Homeopathic Medical College, 1878; aged 78; died, March 26.

GEORGE WALTER HOCHREIN†, Chicago; Northwestern University Medical School, Chicago, 1906; aged 41; a member of the staff of Mercy Hospital; died in that institution, March 21, from heart disease.

CHARLES ROBERT McCrory, Chicago; University of Illinois College of Physicians and Surgeons, Chicago, 1919; aged 32; died, January 21, while undergoing operation on the hand.

JAMES M. PAGE, Chicago (license, Illinois, years of practice, 1887); aged 91; a veteran of the Civil War; died, March 8.

GEORGE HAZLETON POST, Fithian, Ill.; Eclectic Medical Institute, Cincinnati, 1875; died, March 9, following surgical operation.

JOHN BENJAMIN ROE, Oregon, Ill.; Bennett College of Eclectic Medicine and Surgery, Chicago, 1895; aged 49; a member of the Illinois State Medical Society; lieutenant, M. C., U. S. Army, and discharged, June 6, 1919; died at Wesley Memorial Hospital, Chicago, March 26, from acute nephritis and uremia.

DANIEL WEBSTER YOUNG, East St. Louis, Ill.; Gross Medical College, Denver, 1898; Hahnemann Medical College and Hospital, Chicago, 1899; aged 53; major, M. C. U. S. Army, and discharged October 28, 1919; died, March 20, from heart disease.

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Original Articles

PRESIDENT'S ADDRESS*

W. F. GRINSTEAD, M. D.
CAIRO, ILL.

An official address may treat of some aspect of the science and art of an organization or of its Polity or Policy. In medicine and surgery I believe the presentation and discussion of scientific subjects should be conceded to the scientific assembly and dealt with in the sections.

Polity deals with the system of government.

Policy treats of the working out or application of the system. For example, the "Polity of our government is Republican; but each administration has its own Policy." An official address appears more appropriate to the expediencies of policy.

Let us never lose sight of the fact that the paramount purpose, the goal of medical organization, is scientific advancement of the healing art. Our policies are nothing more nor less than means to that end.

During my long experience in medical society work, I have sometimes thought that some of our professional politicians mistook the means for the end; got the cart before the horse. Referring to Policy as a means to an end, I am reminded of the old saw: "It is not so much what people do as the way they do it."

Oftentimes effort, of the highest order of excellence, is emasculated by the circumstances of its application or presentation. I have in mind instances of splendid effort that have been practically wasted on program. The authors of papers have been disappointed and discouraged. Their admirable enthusiasm and industry have been chilled. When asked again to put their shoulders to the wheel of progress the response is "Let George do it." "I took that bait on a former occasion and got shelved," they say. Have you ever been on a program which had twice as

many papers and addresses as were usable and had your paper read by title and referred? You had spent many long hours in looking up your records and consulting standard authorities in elucidating your subject. You had anticipated clearing the atmosphere about the subject by appropriate emphasis in its delivery and by animated discussion by your confreres in the section. I have seen this thing happen over and over again. It is unfair, unjust and uncalled for. The great American Medical Association has recognized this handicap and taken action upon it. Article 9, Section 1, of the Constitution of the A. M. A. reads as follows: "The scientific assembly of the American Medical Association is the convocation of its Fellows for the presentation and discussion of subjects pertaining to the science and art of medicine." I sat with the House of Delegates, not as a Delegate, however, at the Atlantic City meeting of the A. M. A. in 1919, when the following rules for the guidance of the council of the scientific assembly, which had been adopted at the New York meeting in 1917, were revised as follows:

1. The term "unit" shall signify a single meeting of a section at an annual session.

2. The sections of the scientific assembly shall be limited at each annual session to the maximum number of three units.

3. The sections shall not hold more than one meeting on each of the days of the annual session during which section meetings are held.

4. The council on scientific assembly shall apportion the morning and afternoon units at each annual session to the several sections.

In Chapter 14, Section 12, of the By-Laws of the A. M. A., you will find the following: "The number of papers, including addresses, on the Program of any section, shall not exceed twenty-five (25).

Section 13 directs: "A Fellow shall present no more than one paper at any scientific assembly."

At our State meeting last year the Surgical

*Delivered at the 71st annual meeting of the Illinois State Medical Society at Springfield, May 18, 1921.

Section had 34 papers on the Program and the Medical Section had 41. We have only two days of section work, Wednesday and Thursday.

The sections on Thursday afternoon have a light attendance. Everybody goes home and the essayist, and even the new President, addresses too many empty chairs.

I would like to urge upon our State Society, the second largest of all the states, to profit by the experience of the greatest medical organization in the world, the A. M. A. We must bring out the very best there is in our very best men and guarantee them every possible reward for enthusiastic effort.

The foregoing remarks lead logically to the consideration of our Delegates, both to the State and National Associations. I have had abundant opportunity to observe the creation and operation of both. I cannot recall a meeting of either which I have not attended for many years.

Formerly I did not like to attend the proceedings of the House of Delegates of the A. M. A. Its sessions deprived me of the scientific work of the sections which, after all is said and done, is the main purpose, the backbone, so to speak, of all medical organizations. It is the end to which everything else is the means. After I had served our State Society once as Delegate to the A. M. A. I was entirely willing that other Fellows should have the honor in the future. So many Fellows had the same feeling on the subject, that our professional statesmen opened their eyes or had their eyes opened to the fact that our best men were shying away from the business and legislative functions of our big organization and that disaster was pending as a consequence.

Some method must be devised to eliminate this conflict between the scientific assembly and the administrative necessities of organization. The consequence has been that the House of Delegates of the A. M. A. meets on Mondays preceding the general opening sessions on Tuesdays; and the latter, which formerly convened Tuesday mornings has been changed to meet on Tuesday evenings. This plan enables the House of Delegates to clean up the greater part of its annual business before the work of the sections starts, thereby permitting those who bear the business and legislative burdens of the big organization to participate in the work of the scientific assembly.

Now, for the several years following this change, I find myself arriving in the city where the annual sessions are held on Sunday evenings preceding and attending the sessions of the House of Delegates the same when I am not a Delegate as when I am a Delegate. The proceedings are of absorbing interest and educational in a way. That is to say that one observes the methods of big business and the parliamentary usage of statesmen in executing the greatest amount of work in the shortest period of time. One gets a glimpse of the wide scope of activities of the scientific army that dispense such a world of health and happiness to mankind. In this connection I may be pardoned for reminding you that many Delegates are elected by our county and state societies because they are good fellows and we like them and want to compliment them. This is a mistake. There is a vast difference between a good fellow and a good Delegate, although one may be both. A good fellow may stay at home and not attend the meetings or he may attend the annual sessions but put in his time sight-seeing and having a good time and rarely take a look-in at the sittings of the House of Delegates. This loses to his county or state its representation in the parent body. Any of you can verify the truth of these statements at the annual meetings if you care to do so.

In selecting delegates we should always keep in mind these questions: Is he good delegate timber? Will he attend the meetings? Will he attend the sittings of the house after he gets to the meeting? Now, gentlemen, these questions are not idle but are of great importance.

THE NURSING SITUATION

The Doctor's best friend and the patient's *next* best friend is his nurse. On three occasions in my span of life I have been at death's door; first, with broncho-pneumonia; second, with typhoid fever; third, with cholecystitis. What did my nurses do? By their loyal, faithful co-operation with my physicians and surgeons they kept me out of the hands of the undertaker. That's all. Don't ask me about the esteem in which I hold the trained nurse. Let the above statement answer.

Several years ago I determined to saddle upon myself the self-imposed task of attempting to start a training school in a hospital of about 75

beds at that time; but now building for a capacity of 115 beds in a city of about 15,000 people.

The city had one other hospital but it was owned and operated by our "Uncle Sam" and was open to marine patients only. I found I had an up-hill pull. Our only hospital open to all classes and occupations of people was owned and operated by an order of sisters who were faithfully doing the very best they knew but not one of them had ever seen a training school for nurses and, therefore, not profoundly impressed with the advantages of a training school education for nurses. I made practically no progress for a few years. Finally I went down to New York for some post graduate work and sought the acquaintance of an unusually capable superintendent of a large training school for nurses who was good enough to sacrifice much of her valuable time in telling and showing me the salient features of the practical operation of a training school for nurses. Following these conferences I sent her to the book stores to select a full set of books on all the branches taught in the best training schools. These were boxed and shipped at my expense to St. Mary's Hospital, Cairo, Ill. When they were opened up our sisters read them eagerly and were soon co-operating with me enthusiastically in the organization of a training school for nurses which is now an established going, successful school.

This experience with the added exigencies of nursing created by the world's war have firmly impressed some lessons upon me that I hope to see worked out practically in solving the nursing problem.

Not only the medical profession but the lay public have been familiar with the scarcity of competent nurses and their fees for service that placed them beyond the reach of people of moderate means. Even some of our hospitals have been almost begging for nurses. The situation has grown intolerable and a remedy must be found. Let me give you an example from my personal observation. Some young people, married less than two years, were on the anxious seat over the prospect of their first baby. Like many young married people they were not abundantly financed but were determined to draw liberally upon their small bank account, or even their credit, for the safety of a trained nurse. They appealed to me to assist them in securing this service. On the afternoon of the same day of the

appeal, I chanced to see three trained nurses having a little group conference. I interrupted them to lodge the above appeal with them. One of them, acting as spokeswoman, named a price that surprised, not to say provoked me. A few days later I was supplied with a fee bill that had been adopted by these young women that announced \$60 per week for obstetric nursing. Now, candidly, how many families have you gentlemen on your list, in general practice, who can afford to add this to the other expense incident to the arrival of a new baby? Now it just happened that my colleagues and myself had donated our service in helping to educate these young women who had been admitted from families of middle class people, who are the best in the world, and whose parents had been able to give them a high school education. I don't need to tell you about the talk they put up in justification. It is the old story of human nature in humanity. As confessed to you in my previous remarks, no class of people is more popular with me than the trained nurse and it really distresses me to see them put themselves out of business, as they surely do, by such uncharitable methods.

Some of them are now heaping anathemas upon me because I pointed out their error and aligned myself on the side of the sick and injured and with our good women who assume the noble duties and responsibilities of motherhood.

We have all noticed the modern tendency of organized nursing toward a nursing aristocracy. About a year ago a symposium of the nursing problem was read and discussed before the Chicago Medical Society. Such capable and well known medical statesmen as Charles E. Humiston, Edward H. Ochsner and Malcolm L. Harris and others presented an array of facts and conclusions anent the subject. The following excerpt is taken from Dr. Harris' paper: "We are up against a serious proposition. We cannot get away from it. There are one or two hospitals that have large affiliations that can get girls. But the hospitals throughout the United States are having great difficulty in getting nurses. It is not a local situation entirely. At the meeting of the American Medical Association, held two weeks ago in New Orleans, where I had an opportunity of communicating with every state in the Union, I found that other states are in the same fix that we are in Illinois in regard to the nursing profession. Several said to me, 'I wish you

would come down to our state and help us out. That is the situation all over the country, and it has come about by nursing organization making a deliberate and concerted attack throughout the entire country to dominate and control hospitals, as has been expressed publicly by the president of the organization here: 'It is the intention of the nurses to retain control of the hospitals.' Those were her words. That sentiment has been fostered by the organization throughout the entire country, and the hospitals through the country are suffering under that today. The nurses are constantly growing fewer and fewer. How to remedy it is a serious question. In all lines of employment there is a shortage of help due to general conditions, but the shortage of nurses has been growing ever since the first registration act. From that time on there has been a tendency to limit the supply and increase the training until the girls have been overtrained as nurses. They have been trained out of the field of waiting on the sick and have become advisers of the sick. That was perfectly evident in the bill they introduced a year ago, where they attempted to make two classes—advisory nurses who were to give all instructions and do all the teaching, and advise patients at the bedside, and the menial nurses who were to do all the work. The menial nurse could never do anything else. She was kept for that purpose and never allowed to get out of that position. The real nurse was to boss her. The real nurse was to have all the advisory positions, all the public health positions, all teaching positions and all supervising positions and everything of that kind. Other nurses could never have a position of that kind under the law, but were kept to do menial work. Of course all these conditions were wiped out of the bill."

In the same symposium, the much-talked-of and sometimes-talking, health commissioner of Chicago, Dr. John Dill Robertson, declared that the patron saint of the modern trained nurse, the Angel of that deadly Crimean War, Florence Nightingale, had received only three months' training in a German training school. He said it was a mistake to call nursing a profession; nursing was housekeeping for the sick.

In his presidential address before the American Medical Association in June, 1918, Dr. Arthur Dean Bevan used the following language: "Nurs-

ing training camps and training schools can be developed in our army and navy cantonments where women can be developed into most useful war nurses with an intensive three months' training and meet the needs of the Government. The surgeon-general of the army has already taken steps to encourage these nurses' training schools."

These facts and eminent opinions, together with my long experience as a practicing physician and surgeon and promoter of a training school for nurses, form the basis of my personal opinion of the problem of the trained nurse and the present intolerable nursing situation.

At our training school many fine young women have inquired about the terms of admission, who had finished grammar school. They were turned away because we would not be allowed on the approved list. We wanted to be respectable. We wanted to measure up to the standard that had been pointed out to us. I believe they ought to be admitted. I know we can make splendid nurses out of them. I know we very much need them.

They may not have had lessons in elocution. They may not render eloquent readings, with thrills, for the entertainment of the sick heiress. They may not have had a course in art and therefore not qualified to produce comic drawings for the amusement of sick children; but they will go to the kitchen and prepare their food properly; and they will relieve the sick child and the sick heiress of the vexatious delay in summoning an orderly or pupil nurse to enter or exeunt a commode. If she has good common sense and the enthusiasm to make good in her work, she can be trained to render satisfactory service to doctor and patient. Moreover, she can qualify in two years in a properly equipped and well appointed training school. After she has qualified and has been authorized to enter upon her work, if she decides to specialize in administrative nursing, in obstetric, pediatric or surgical nursing, let her take a post-graduate course of training for that purpose.

After all is said and done I wish to declare my eternal allegiance to the trained nurse. I will never forsake her. Just now she needs to be protected against herself. The medical profession will stand by her. She is the doctor's best friend. Next to the doctor, she is the patient's best friend. There is no better wife, there is no better mother than the trained nurse.

PNEUMOCOCCUS PERITONITIS*

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APPLETON, WISCONSIN

The surgeon still continues to meet with some cases of peritonitis in his practice, although the number met with each year becomes lessened. The number met with by any individual surgeon of pneumococcus peritonitis up to the present time has been limited. During the years 1918 and '20, two cases of pneumococcus peritonitis have come under my observation and which furnish the basis for the following remarks.

The history of case 1 is as follows:

Case 1. Dorothy G., age $2\frac{1}{2}$ years, entered St. Elizabeth Hospital, March 15, 1918, referred by Dr. Finney. Her previous history was negative excepting that she had recovered from a lobar pneumonia which had its onset three weeks previously. The temperature had been normal for more than a week, and three days previous to her entrance into the hospital she complained of abdominal pain; some vomiting and diarrhea were present. The temperature upon her admission was 104 degrees F., the pulse 140. Upon examination the right rectus revealed a slight rigidity with the evidence of a moderate tumefaction subumbilical and to the right. The blood revealed a leucocytosis of 28,000. A diagnosis of a perforated appendix was made. Upon opening the abdomen a seropurulent fluid, odorless, of a yellowish-green color, appeared. The coils of intestines were injected. Upon bringing the appendix to view I was surprised to find it normal in appearance. It was deemed advisable to remove it as the patient was not subjected to any marked additional danger in its performance. Some of the material was taken for bacteriological examination. Tube drainage was used and the usual treatment for peritonitis was instituted, i. e., Fowler position and proctolysis. The first few days of the patient's convalescence were somewhat stormy and excepting for a spell of crying a week later, when an evisceration occurred and which necessitated resuture of the abdominal wall, complete recovery ensued. My laboratory reported an unmixed presence of pneumococci organisms which agreed with the report of an examination of the same material sent to the State Hygienic Laboratory at Madison.

Case 2. Anita V., Medina, Wisconsin, aged 5 years, referred by Dr. Ott, entered St. Elizabeth Hospital, January 18, 1920. Her health had been normal up to four days previous to the onset of her present illness. The illness began suddenly with a high temperature, vomiting, frequent bowel movement and pain in the lower abdominal region.

Upon examination the little patient was found to be intensely ill. The temperature was 105.4 degrees

per rectum, pulse 150, and evidences of a severe toxemia were present, as manifested by a slight cyanosis and some dyspnea. The abdomen was not markedly rigid, yet there was present a right subumbilical tumefaction. The leucocytic count was 40,000 with a marked preponderance of polymorphonuclears. It was evident that a peritonitis existed but with an obscure origin. The present symptoms were incompatible with those produced by a perforation of an intra-abdominal viscus. A peritonitis of pneumococcus origin was thought of, for the information obtained in our experience with the previous case was still vivid in our memory. An abdominal exploration was deemed advisable, and to which she was subjected. Upon opening the abdomen a marked amount of seropurulent fluid, yellowish-green in color and odorless appeared. It was then plainly evident that we were dealing with the same condition as in the previous case reported. Some of this exudate was taken for bacteriological examination. The reports of the State Hygienic Laboratory by Dr. Stovall and my own laboratory were agreed as to an unmixed strain of pneumococcus. It was not typed. This little patient had a most stormy convalescence, but she finally recovered and was dismissed from the hospital March 27, 1920. During this period it was necessary to make a suprapubic incision to give exit to an accumulation of pus which developed in that region. A few days later a pneumonia appeared in the right lower lobe which resolved. Following, an acute nephritis appeared which subsided after a week. Metastatic abscesses then appeared in various parts of the body which were incised and the contents evacuated. An autogenous vaccine was made and used assiduously, but with apparently no avail. The condition of the little patient was truly alarming, for it appeared that she would not recover. Her emaciation was most extreme. As a final resort it was thought to use heliotherapy, "with nothing to lose and everything to gain." The little patient was therefore subjected to the sun's rays in a nude condition and with the most happy results, for within a very few days convalescence appeared and her full recovery ultimately ensued.

There is no doubt that this disease has a clinical entity and which is characteristic.

Summary of cases reported:

Von Brunn in 1903, collected 57 cases of pneumococcus peritonitis in children and 15 adults; by 1906, Annand and Bowen state 91 cases were recorded mostly in children. Additional cases to this list are recorded by C. R. Belgrano, *Reforma. Med.* April 7, 1917; 4 cases by Abt. A. I. N. Y. M. J. April 28, 1917; one case by Meredith, E. W. P. M. J. 1918; one case by Mac Williams, H. H. Brit. M. J. Feb. 22, 1918; one case by Edwards E. R. and Noble F. B. J. Ind. M. A. April 1, 1920; and the two cases occurring in my own practice, making a total of 102 cases.

*Read before Annual Assembly, Tri-State District Med. Society, Oct. 4, 5, 6, 7, 1920.

Syms in a careful review of the literature of pneumococcus peritonitis states:

"It is a disease particularly affecting children. Up to the fifteenth year of age it is three times as prevalent as after that period.

"It is much more frequent among girls than among boys in the proportion of three to one.

"It may occur: 1. as the only local manifestation; 2. as a sequel to some previous site of pneumococcus infection, i. e., lung, pleura, pericardium, ear, etc., or 3. as a part of a general septicemia in which other organs are simultaneously involved.

"It is found in two varieties; 1. As a diffuse general peritonitis and 2. an encysted or localized process. Some claim that these two conditions represent stages of the disease, and that there is always a diffuse peritonitis at first which later becomes localized by intestinal adhesions. Others (Michaut) claim that there are two distinct varieties of the diffuse."

Upon the other hand some writers contend these varieties are produced by a difference in the virulency of the same organisms, and so are distinct types.

Again quoting Syms:

"The first stage is that of toxemia, the child being overwhelmed by the poison. There is a great depression and the patient is much more ill than the abdominal symptoms would indicate.

"The second stage is characterized by abdominal symptoms; the signs of advancing peritonitis.

"The third stage is characterized by a continuance of the signs of peritonitis with effusion. During this period there is often an abatement of the active signs of toxemia. The temperature may fall and the patient may seem decidedly less ill. If the pus has become encysted or localized there will be signs of intra-abdominal abscess or abscesses. The abdomen becomes distended; this particularly relates to the lower part of the abdomen, for the disease is usually subumbilical. When loculation has taken place there is usually an irregular swelling of the abdomen, one side being affected more than the other. One characteristic of the disease in its late stages is the protrusion of the umbilicus and its final perforation. There have been many reports of the discharge of pus through the umbilicus and this seems to be a condition almost peculiar to the disease. The discharge will be of the character-

istic greenish-yellow, serofibrinous, odorless pus."

"Hector Cameron states his position very clearly when discussing the question of treatment. He regards the diffuse form of peritonitis as belonging to the early stage and not as representing a distinct type of the disease.

"Whether diffuse pneumococcus peritonitis is an early stage or a special form of the disease, the fact remains that it represents the period or condition of the utmost gravity. Annand and Bowen, analyzing 91 cases that had been bacteriologically studied and satisfactorily reported, found in the diffuse form a mortality of 86 per cent. In the same series of cases in the encysted form there was a mortality of but 14 per cent.

"In the same article Annand and Bowen describe 16 cases which had occurred in the East London Hospital for Children. All of the 16 of these cases were of the diffuse variety. Death resulted in all 16, showing a mortality of 100 per cent."

Etiology: Abt states: "The disease represents a specific infectious process, but the route is difficult to establish. Two groups are recognized: 1. the primary or idiopathic; 2. the secondary, in which the peritonitis is subsequent to some pre-existing pneumococci lesion elsewhere, pleuropneumonia being the most common, and otitis media the next distinctive type is justified, although this path of invasion is obscure."

Fishbein in his clinical article on "The Bacteriology of Peritonitis" states: "The anatomical character of the inflammation does not bear any relationship to the nature of the primary lesion when such exists, nor does it seem to be influenced by the presence of various bacteria alone or in combinations of various kinds. Various bacteria or the same bacteria cause the same or different forms of peritonitis."

Symptomatology: The disease presents a clinical picture that is characteristic and which should lead to diagnosis in the most primary cases. Its characteristic signs are sudden onset, extreme toxemia, vomiting and diarrhea, very high temperature, and a very high leucocytosis with a high polymorphonuclear count. There is a notable absence of local pain, local tenderness, and local rigidity as compared with appendicitis or perforation peritonitis. Some have described the abdomen as having a "doughy" feel. Added

to all this is the pneumonia aspect-cyanosis, slight dyspnea, great depression, etc.

Diagnosis: A correct diagnosis of this condition is all important. We must decide whether the case is or is not one of pneumococcus peritonitis and if it is pneumococcus whether it is diffuse or encysted as operation is not indicated in the former, but decidedly so in the latter. The important points in the diagnosis are sudden onset, with no prodromal symptoms, the presence of an extreme toxemia and depression. It is often ushered in with a chill. High temperature is characteristic with a very high blood count, from 20,000 to 40,000. Diarrhea may appear early or be developed in a day or two. Peritonitis with diarrhea should always make one suspicious of pneumococcus. Early drowsiness, restlessness, and delirium point to the involvement of the nervous system from the intense toxemia. A condition we frequently find in pneumonic affections of the lungs. In pneumococcus peritonitis the constitutional symptoms overshadow the abdominal findings in contradiction to the early stages of a perforative appendicitis. There is no distinct point of tenderness. The abdomen has a peculiar "doughy" feel. The presence of fluid may be determined and is usually subumbilical and unilateral. A blood examination is of the utmost importance as it may reveal a bacteremia.

J. Dub states: "Pneumococci have been found in the urine even from the earliest phase of the peritonitis." Upon opening the abdomen evidences of a peritonitis are found with no local point of origin. The appearance and character of the exudate consisting of an odorless, seropurulent, yellowish, green color, containing a great amount of fibrin is significant.

Treatment: Most operators are agreed that an expectant treatment is to be pursued in those cases of pneumococcus peritonitis of the diffuse variety; this treatment should be open air, heliotherapy, supportive, proctolysis, and the Fowler position.

Operation is indicated and advisable where the exudate has become loculated, and where the extreme toxemia and depression have subsided. The dictum of J. B. Murphy still holds good, "Where there is pus, evacuate—get in quickly and out hurriedly." Serum treatment has a legitimate use here as elsewhere in the body in pneumococci peritonitis.

Conclusions: 1. Pneumococcus peritonitis is a disease of childhood affecting principally girls.

2. Its onset is sudden, manifested by a severe toxemia, and a very high mortality.

3. Two forms are distinguishable 1. diffuse, 2. encysted or loculated.

4. The symptomatology is characteristic.

5. Treatment is 1. expectant and supportive, 2. surgical.

BIBLIOGRAPHY

- Abt, I. A.: Pneumococcal Peritonitis in Infancy and Childhood. New York, M. J. 105; 769, April 28, 1917.
- Anand, W. F., and Bowen, W. H.: Pneumococcal Peritonitis in Children. Lancet 1906, 1:1591.
- Belgrano, C. R.: Reformo Med. Napoli, April 7, 1917.
- Berard and Colombet: Peritonite a pneumocoques chez l'adulte. Lyon med. 117:380, 1911.
- Brunn, M. von: Die Pneumokokken Peritonitis, Beitr. Z. klin. Chir. 39: 57, 1903.
- Cameron, H. C.: Pneumococcal Peritonitis in Children. Brit. J. Child. Dis. 9:264, 1912.
- Campbell, W. F.: Pneumococcus Peritonitis. Med. Times 42: 337, 1914.
- Dickinson, C. K.: Pneumococcal Peritonitis. J. M. Soc. New Jersey, 7:244, 1910-11.
- Dubs, J.: Differential Diagnosis of Acute Appendicitis in Children. Schweizerische Medicinische wochenschrift, Basel, April 29, 1920, 50 No. 18.
- Edwards, S. R., and Noble, F. B.: Case of primary peritonitis, J. Indiana M. A., April, 1920.
- Fishbein, Morris: Contribution to the Bacteriology of Peritonitis, with special reference to Primary Peritonitis. Am. Jour. Med. Sc. Oct., 1912.
- Green, N. W.: Idiopathic Peritonitis, probably of Pneumococcus Origin. Anna. Surg. 60:387, 1914.
- Hafers, E. H.: Ein Beitrag zur abgekapselten Form der Pneumokokken-Peritonitis. Deutsche Zeitschr. f. chir. 137:244, 1916.
- Hallez, G. L.: La Peritonite a pneumocoques chez les enfants du premier age. Nourisson, 3:138, 1915.
- Jensen, J.: Die Pneumokokken Peritonitis. Arch. f. klin. Chir. 60:1134; 70:91, 1903.
- Kahn, L. M.: Pneumococcus Peritonitis, New York, M. J. 100:1166, 1914.
- L., C. P.: Peritonite a Pneumocoques, J. de med. et chir. prat. 83:582, 1912.
- Ledoux.—Deux observations de peritonite pneumococcique primitive. Rev. med. d. l. Franche-Comte. 20:1, 1912.
- Mac Williams, H. H.: Pneumococcal Peritonitis in adult. Brit. M. J. 1919, 1:216.
- Meredith, E. W.: Pneumococcus Peritonitis. Penn. M. J. 21:556, 1918.
- Mathews, F. S.: Pneumococcus Peritonitis. Ann. Surg. 40:698, 1904.
- Michaut, C.: Contribution a l'etude de la peritonite a pneumocoques chez l'enfant. Paris Thesis. 1901.
- Moro: Zur Statistik der pneumokokken Peritonitis. Deutsche med. Wchnschr. 43:288, 1917, also Munch. Med. Wchnschr. 64:846, 1917.
- Moslein: Pneumokokken Peritonitis. Deutsche med. Wchnschr. 38:1765, 1912.
- Nobecourt: Peritonite a pneumocoques. Rev. Gen. de clin. et de therap. 24:115, 1910.
- Noon, C., and Moreton, A. L.: Acute pneumococcal Peritonitis. St. Barth. Hosp. Rep. 48:137, 1913.
- Salzer, H.: Ueber Diplokokken peritonitis. Arch. f. Klin. chir. 98:993, 1912.
- Steblin, Keminski, E. E.: Ueber Pneumokokken Peritonitis. Deutsche Aertze lgt. 1909:319, 342.
- Stone, H. E.: Pneumococcal Peritonitis. Bull. Johns Hopkins Hosp. 22:219, 1911.
- Symptom, N. S.: Pneumococcal Peritonitis occurring during Parotitis without lesion being found in abdomen. Indian. M. Gaz. 48:107, 1913.
- Syms, P.: Pneumococcus peritonitis. Ann. Surg. 67:263, 1918. Discussion p. 247.
- Verbizuer, A. de: Peritonite a Pneumocoques chez l'adulte. Toulouse med. Ser. 2. 15:1, 1913.
- Wetzel, E.: Ueber ein fall von Peritonitis pneumococcica extragenitalen. Ursprunge bei einer Puerpera. Munch. med. Wchnschr. 62:109, 1915.
- Wharton, N. R.: Pneumococ Peritonitis. Tr. Philadelphia, Acad. Surg. 13:80, 1911.
- Williams, W. R.: General Suppurative Pneumococcus Peritonitis. Med. Rec. 87:711, 1915.
- Woolsey, G.: Pneumococcus Peritonitis. Med. and Surg. Rep. Presbyterian Hosp. 9:507, 1912, also Am. J. M. Soc. 141:864, 1911.
- Zimmerman: Peritonite pneumococcique. Rev. med. de la Suesse Rom. 34:435, 1916.

ABSCESS OF LUNG*

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Abscess of the lung is not noted for its rarity today, although not many years back it was looked upon as a rare condition. While some writers try to make a distinction between abscess and gangrene, this is usually impossible for they are often combined. The case I report today I consider one of abscess pure and simple. Usually it is a process which has reached the lung through a neighboring structure. Recently our medical literature has been full of reports of abscesses of the lungs following tonsillectomies under a general anesthetic. In most of these cases, the infection is by inhalation. Most abscesses of the lungs follow pneumonia. In 1200 cases observed by Frankel 2 per cent had abscesses. In Massachusetts general hospital in 50 cases of pneumonia coming to necropsy, 14 had abscesses.

Our recent influenza epidemics were noted for pneumonic complications. At Bellevue Hospital in 45 necropsies, 16 pulmonary abscesses were found. During 1916, the Mayo Clinic operated on 16 cases of lung abscesses and the etiologic factors were classified as follows:

Pneumonia post operative.....	4
Teeth extraction	3
Tonsillectomy	2
Gastro-enterostomy for ulcer.....	1
Grip	1
Traumatic pneumonia	1
Questionable	4

The case I wish to report is one of an Italian boy, 4 years old, who was brought to my office with an infection of the gums around the molar teeth of the left upper jaw. His face was swollen on this side. I lanced the gums, getting pus and gave the parents a permanganate of potash wash. Did not see the boy again for several days as is characteristic of this race to either change doctors frequently or come to the office as they think they need to. When they did bring him back the swelling of the face had subsided, but the two teeth were very loose and I referred them to a dentist to have the teeth extracted. Did not see him again for about one week, when they called me to the house and I found a well marked abscess in the palate. This I lanced

with a copious discharge of pus. His mouth symptoms from this time improved rapidly. In about three weeks they brought him to the office on account of a hacking cough, loss of appetite and emaciation. Temperature was 101, and the boy looked decidedly septic. He complained of a pain in the right axillary region. There was dullness in the upper right apex, and large gurgling rales. There was slight bulging of the second and third intercostal spaces to outer side of chest on this side. Aspiration with a hypodermic easily struck pus. I took the boy to the hospital and under local anesthesia dissected between second and third ribs and easily got into an abscess. There was four ounces of thick yellow pus, and the cavity was about three inches deep, pointing toward axilla posteriorly. I put a tube to the bottom of the cavity. This was removed in seven days as it quit draining, and the boy returned to normal in a short time.

I report this case as one of inhalation type, with an unusual situation of the abscess, being at the apex and in front.

CANCER OF THE PANCREAS: POST-MORTEM REPORT*

JOHN D. HAYWARD, M.D.

ST. LOUIS, MO.

The clinical and laboratory manifestations of a neoplasm whether malignant or benign have a definite relation to the functional disturbance or the organ primarily involved, and to that of any other organ secondarily affected through either a metastasis or pressure from the new growth.

In order to thoroughly comprehend the significance of the clinical, laboratory and post-mortem findings in the case to be reported, I deem it expedient to briefly review the anatomical relations and functions of the pancreas. The pancreas lies retro peritoneal. A great part of the gland is in the epigastrium but the tail and a portion of the body extend into the left hypochondrium. The inferior part of the head projects below the subcostal plane into the umbilical region. The head almost surrounded by the duodenum lies opposite the second and upper part of the third lumbar vertebrae. The body passes to the left behind the stomach and is

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*Read before Southern Illinois Medical Association, Carbondale, Nov. 4-5, 1920.

opposite the first lumbar. The tail is in contact with the spleen.

The pancreas is located in a vascular zone sustaining close relations to important blood vessels which accounts for the vascular phenomena occurring when these structures are pressed upon by certain tumors involving the gland. Immediately behind the head are the aorta, inferior vena cava, right renal vessels, and the left renal vein. The superior mesenteric vessels pass forward through the pancreatic notch. The splenic vessels run along posterior to the gland, and just behind the neck the splenic and superior mesenteric veins unite to form the portal. Immediately before this union takes place the splenic receives the inferior mesenteric veins from the descending colon, the sigmoid, and rectum, and usually the right gastric vein from the greater curvature of the stomach. In ninety-six dissections made by the students when I had charge of an anatomical laboratory, there were present two pancreatic ducts in seventy-four of the series. The main pancreatic duct usually unites with the common bile duct, both emptying into the duodenum by a common orifice three and a half to four inches below the pylorus. Before the two ducts unite, the common bile duct passes between the head of the pancreas and the duodenum. The accessory pancreatic duct empties into the duodenum three-fourths of an inch above the orifice of the main duct. Someone has called the pancreas the "abdominal salivary gland." It differs from the salivary gland in that it not only has an external secretion which is essential to proper digestion, but it contains groups of cells, the "Islets of Langerhans," which elaborate an internal secretion, essential to normal metabolism, and influence the assimilation of sugar. A malignancy involving the Islets of Langerhans produces a hyperglycemia and a glycosuria. These two phenomena occurring in a diseased pancreas are positive contra-indications for any operative procedure. The external secretion of the pancreas, or that conveyed through the duct into the duodenum, contains certain ferments; trypsin which converts proteids into peptones and amylase which acting on starch converts it into maltose and then glucose. It also contains rennet, or a milk curdling ferment. Oils and fats are emulsified and saponified by the pancreatic fluid. There remains some difference of opinion among physiological investigators

as to whether these processes are brought about by a ferment called steapsin.

The case which I wish to report is indeed interesting because the clinical, laboratory and post-mortem findings thoroughly establish a complete disturbance of function in the gland, also involvement of all the structures I have enumerated as related to it.

An American farmer, aged 62 years, family and past history negative; about a year ago began having digestive disturbance with loss of appetite and a gradual loss of weight. Three months later jaundice gradually developed. This came on without any pain and has steadily increased until at the present time, May 20, 1920, the skin has a deep green-black tinge. There is intense prostration, patient is very feeble and wasting is extremely rapid. A year ago his weight was one hundred ninety-five pounds. At present he weighs one hundred twenty, having lost forty pounds in the last two months. The patient has frequent passages of bulky, white or clay-colored stools and occasionally there is slight hemorrhage from the rectum. Nausea is almost constant with an occasional blood-stained emesis. For several weeks there has been edema of the lower extremities and considerable distension of the abdomen. Physical examination revealed a very much emaciated subject with skin deeply jaundiced, heart and lungs negative reflexes normal, and abdomen distended with dullness in flanks, below splenic area and over the epigastrium. In the latter location a well defined tumor could be palpated. Below the ninth costal cartilage a soft round mass, about the size of an orange could be made out. On the following day two hundred forty ounces of fluid were withdrawn from the abdomen by tapping. The fluid rapidly accumulated again and the patient died four days later after twenty-four hours of delirium.

Laboratory Report. The fluid removed by tapping was stained with blood and bile, specific gravity 1010. The sediment contained 70 per cent lymphocytes and 30 per cent endothelial cells. The Wassermann reaction was negative. Hemoglobin 70 per cent; red cells 2,900,000 and leucocytes 9,000. There was a hyperglycemia, the sugar output being about four-tenths of one per cent. The results of urine analysis were as follows: color, dark brown, reaction, acid specific gravity 1035, sugar, acetone diacetic acid and bile, positive, slight traces of albumin, few erythrocytes and many leucocytes and epithelial cells, some hyaline casts and an abundance of calcium salts. The feces were acid in reaction and showed presence of occult blood, an abundance of undigested fats and proteids in the form of meat fibre.

Post-mortem Findings and their Significance. The postmortem examination revealed a tumor of unusual size, involving the head, neck and part

of body of pancreas, with an infiltration of posterior wall of stomach and pressing upon surrounding structures. The common bile duct was obstructed which accounted for the jaundice, the presence of bile in the urine and that found in the fluid removed from peritoneal cavity. It also contributed to the change in color and constituency of the stools. The pancreatic duct was occluded, thus producing the steatorrhea and azotorrhea. The gall bladder was greatly distended. This was the soft round mass felt below the ninth costal cartilage during clinical examination. A distended gall bladder with undigested fats and proteids in the stool, is strongly suggestive of pancreatic disease. When these signs are accompanied by the presence of sugar in the urine and an increased output in the blood, the diagnosis is established. The Islets of Langerhans are found in the body of the gland and as this portion was involved, we can account for the hyperglycemia and the glycosuria. However, it is a question to be decided whether these two phenomena are due to an increased liberation of sugar in the blood or the lack of tissue assimilation of the normal output. The growth had extended posteriorly, pressing on the inferior vena cava, causing the edema of the lower extremities, on the renal vessels resulting in renal congestion, and on the portal vein at its origin, thus producing stasis in the superior mesenteric, the splenic, the inferior mesenteric and the gastric veins. This obstruction to the return circulation through portal vein and its tributaries produced the acites, the splenic engorgement, the hemorrhage from the rectum and the blood in the emesis. The increased output of calcium salts in the urine, thus impoverishing the blood, may also have been a factor in producing the last two conditions.

The pathologist reported the growth to be a carcinoma of the pancreas.

LOCAL ANESTHESIA IN ABDOMINAL SURGERY*

CHAS. A. STEVENS, M. D.,
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The Choice of Drugs: Before the recent world war, I began using novocain for local anesthesia in minor, and in some major, surgery. The supply that I was able to secure enabled me to continue its use to a limited extent during the war. Now I am using procain, a product manufactured in America from the German formula of novocain. I use the procain because it is effective and because of its low toxicity. The 0.5 per cent. solution with a 1-60,000 epinephrin is used for all major operations. The epinephrin

renders the field almost bloodless and prolongs the anesthetic action of the procain. On inflammatory tissue as for incising local inflammations, or in working on fingers or toes, where the amount used is necessarily limited, a 1 per cent solution will produce anesthesia more quickly.

If a 0.5 per cent. solution is used, in an individual weighing 150 pounds, 600 c.c. may be used before reaching the minimum fatal dose, if injected intravenously. Used subcutaneously, with epinephrin, much larger amounts could undoubtedly be used with safety. As it is seldom necessary to use more than 100 c.c. to 150 c.c. in any major operation. I consider it a particularly safe drug to use for local anesthesia.

The Choice of Patients that it is to be used upon:

First: Any patient where a general anesthetic is contra-indicated and surgical interference is necessary.

1. Cardiac lesions; Care should be used in the amount injected where the patient is already suffering from a toxic condition. That is, in a patient who is already suffering from a toxic myocarditis.

2. Pulmonary lesions; acute or chronic, as bronchitis, pneumonia, or tuberculosis.

3. Kidney lesions; acute or chronic nephritis. In acute nephritis I would sound the same warning as in a toxic myocarditis.

Second; During acute epidemics of infectious diseases, as influenza.

Third; Hernias, as a routine, because of the excellent anesthesia produced in these cases, followed by a quicker and better convalescence.

Fourth: And by no means least, patients who have taken ether before.

Technique: Morphine and Hyoscine. One-half hour before the patient is to be operated upon a hypodermic injection of $\frac{1}{4}$ gr. morphine and 1/150 gr. hyoscine hydrobromate is administered to an adult male. Women and children get a proportionately smaller dose. When the patient is brought to the operating room, if he does not seem to be sleepy or is nervous, he is given another hypodermic injection consisting of one-half the original dose of morphine, but without the hyoscine. This quiets the patient,

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allays apprehension, and benumbs the sensations for the injections of the anesthetic solution.

Covering the eyes and plugging the ears. The eyes should be covered with a towel and the ears plugged with cotton. All loud noises should be avoided. Conversation should be carried on in a low tone of voice and dropping of instruments and pans should be avoided. Any sharp noise will cause the patient to rouse up and complain of pain where they had been dozing quietly before, even though the same work was being done.

Padding the operating table. Most operating tables are insufficiently padded. Patients will complain of the table being very hard after a few moments lying on the ordinary operating table. For this reason I have an extra blanket folded and placed under the regular table pad. This may explain many of our patient's complaints of backache following general anesthetics.

Injecting the procain solution. I use a combined infiltration and block method. With an ordinary hypodermic syringe using a fine needle, I inject the skin throughout the proposed line of incision, with a series of epidermal wheals. I then make several of these wheals on either side of the proposed incision. With a 10 c.c. glass syringe and a long slender needle the subcutaneous tissues under this proposed line are next infiltrated, using about 1 c.c. of the solution to each cm., of distance. Using the surrounding wheals for the site of needle punctures, the subcutaneous tissues about the proposed wound are next injected, using the same amount of solution, 1 c.c. per cm. of distance. Again going to the proposed line of incision, the needle is passed through the external oblique fascia and the muscular wall is well infiltrated.

This is all that is usually necessary, but occasionally, especially in fleshy individuals where there is difficulty in properly infiltrating the deeper layers, an infiltration of the peritoneum is necessary before incising it. In hernias the same technique is used, in ventral and femoral hernias being sure to inject freely about the neck of the sac, while in inguinal hernias it is well to pass the needle through the external ring and inject at least two c.c. of the fluid to each cm. of distance along the cord. Also in inguinal hernias, after the external oblique is split and the

ilio-inguinal nerve exposed, lying on the cremasteric muscle, it should be pinched with a plain thumb forceps, and if not anesthetized, should be injected at the upper angle of the wound. The patient will usually complain of pain when the ligature about the neck of the sac is tightened, but neither the deep nor the superficial sutures seem to cause pain.

Sharp dissections and gentle manipulation. All dissecting should be done by cutting and all knives and scissors should be sharp. Blunt dissecting will cause pain as will rough sponging. Retractors should be applied carefully, as should snap forceps, and all traction made should be done gently.

Intra-abdominal work. After the abdomen is opened, almost any work may be done upon the gastro-intestinal tract, provided that no pulling is done upon the mesentary or adhesions. The caecum with the appendix can be lifted out of the abdomen and the appendix removed in the usual manner, if it is done gently and without pulling. The meso-appendix may be filtrated, but I have usually not found it to be necessary. Intestinal resection and suture seem painless. The only pain experienced in a gastro-enterostomy is that produced by the necessary pulling to get the stomach and intestine into position in the clamp. The gall bladder may be removed by infiltrating the line of peritoneum at the junction of the gall bladder and the liver, and about the cystic duct.

Nitrous oxide and oxygen gas. In doing intra abdominal surgery it is well to have an anesthetist and the gas machine handy to give this anesthetic for a few minutes during the painful part of the work, i. e., removing an acutely inflamed appendix, loosening up old adhesions, while placing the stomach or intestines into clamps and ordinarily while dissecting the gall bladder off from the liver. Five to ten minutes of gas should be given while the more painful work is being done, when it may be discontinued and the operation completed under the local anesthetic already given.

Case 1. Mrs. F., 76 years old. Right femoral hernia, strangulated. This patient had been vomiting for thirty hours. When first seen vomiting was fecal. The heart was very irregular in both time and volume, with albumin and hyaline and granular casts in the urine. The abdomen was greatly distended with some rigidity on the right side. Upon opening the hernial

sac a loop of small gut, about three inches long, was black and lifeless; bloody fluid escaped from the peritoneal cavity. Four inches of this gut was resected with an end to end anastomosis and the hernial wound closed. The skin was closed with S. W. G. and a guttapercha drain placed down to the subcutaneous tissue. Recovery was uneventful except for a slight suppuration of the superficial wound. The patient experienced no pain and dozed during the closing of the wound.

Case 2. Mr. E., 29 years old. Left inguinal hernia and a large right inguinal ring. A herniotomy was done upon the left side and the ring partially closed on the right side. The stitches were removed upon the fifth day. The patient went home on the twelfth day. No pain was experienced.

Case 3. E. A., 9 years old. Double inguinal hernia. Had had an attack of appendicitis three years previous at which time the parents had refused to have an operation performed. A double herniotomy was performed. Through the right hernial ring the appendix was pulled down and removed in the usual way. He complained of some pain while picking up the appendix and drawing it down into the hernial opening. Recovery was uneventful except for a stitch abscess on the right side. The stitches were removed early, the patient going home on the 14th day.

Case 4. Mr. M., 65 years old. Double inguinal herna, scrotal. This man had been operated upon seven years before for an hypertrophied prostate gland and was very much opposed to taking ether. A double herniotomy was done without pain. Recovery was uneventful. All stitches were out on the sixth day, the patient leaving the hospital the twelfth day after the operation.

Case 5. Mr. H., 73 years old. Post operative and umbilical hernias. This man, like the preceding one, had been operated upon seven years previously for an hypertrophied prostate gland. The ventral hernia was in this old abdominal scar just below the umbilical hernia. Both were repaired through the same skin incision. Recovery was uneventful, the patient leaving the hospital on the tenth post operative day.

Case 6. Dr. B., 42 years old. Incomplete inguinal hernia, right, with chronic appendicitis. When the hernial sac was opened the appendix was drawn down and removed in the usual manner. There was some pain during the picking up of and the drawing down of the appendix into the hernial wound. Recovery was uneventful, the skin stitches were removed on the fourth day, the patient leaving the hospital on the eleventh day after the operation.

Case 7. Mr. S., 17 years old. Subacute appendicitis. He had had an acute attack three weeks previous to the operation. The appendix was removed through a gridiron incision. No pain was felt and there was difficulty in keeping the patient from sitting up to watch the operation. He ate a light dinner, following his operation, and a regular diet supper. He had no gas pains and was out of bed on the fourth day. He left the hospital eight days after the operation.

Case 8. Mr. K., 73 years old. Chronic hypertrophied prostate. Benign papilloma of the bladder. The bladder was opened under local anesthesia. Gas-oxygen anesthesia was then given while the papilloma was removed and the lateral lobes of the prostate were shelled out. This required about twenty-five minutes. After packing a hot sponge into the bladder the gas anesthesia was discontinued and the operation completed under the local anesthesia given to open the bladder. The bladder wound closed in about 8 or 9 weeks, a long time, but there was no sloughing and, except for the delay, no complications.

Case 9. Mrs. S., 64 years old. An enormous cyst of the right ovary, that had been tapped fifteen or twenty times in the preceding three years. This patient was short, stout and very cyanotic. She was suffering with chronic nephritis, chronic myocarditis and a high blood pressure. Under the local anesthesia the abdomen was opened and most of the fluid, about 18 quarts, was drawn off. The sac was found to be adherent to the anterior abdominal wall, probably due to the repeated tapplings, over an area of about five or six inches square. Gas-oxygen was given to loosen this adherent area and the operation, including the ligation of the pedicle, completed under the local anesthetic already given. Notwithstanding her heart and kidney lesions, she left the hospital at the end of three weeks following her operation.

Case 10. Mrs. K., 58 years old. Subacute cholecystitis with repeated acute exacerbations, chronic nephritis and myocarditis. This patient had arrived at a state where she was unable or unwilling to eat as she vomited after every meal and was losing weight rapidly. The abdomen was opened under local anesthesia, gas-oxygen was given for about ten minutes while the gall bladder was removed. The abdomen being then closed under the local anesthesia already given. The patient made no complaint while on the table but later complained that the pain had been severe and that nothing could induce her to go through such an ordeal again. I saw her a year later. She had gained weight, and said that she could eat anything and never vomited or suffered any discomforts, but still insisted that the operation had been very painful.

Case 11. Mrs. M., 45 years old. Chronic cholecystitis and an organic heart lesion that had existed since an attack of rheumatism in her girlhood days. The abdomen was opened as in the preceding case and gall bladder removed under gas-oxygen anesthesia. This required about ten minutes. The pylorus was found to be very much narrowed by a cicatrix, probably an old healed ulcer. A "Finney" pyloroplasty was done and the abdomen closed without further anesthesia. This woman was an Italian of a decided neurotic type. She had done no work for more than a year. She is now at her old trade, dress-making, and supporting herself and her children.

Case 12. Mrs. R., 46 years old. Carcinoma of the pylorus. The abdomen was opened, the pyloric end of the stomach removed, and the ends of the

duodenum and the stomach closed without apparent pain. As soon as an attempt was made to bring the stomach and the ilium out to do a gastro-enterostomy, she complained of pain. Gas-oxygen was given while the parts were brought into place and the clamps applied. The gastro-enterostomy was then done without anesthesia and the abdomen closed. The only complaint of this patient, during or following her operation, was hunger. At the end of a week she was eating soft diet and at the end of two weeks she went home.

I have cited the above cases to show the wide range of abdominal surgery that may be done under local anesthesia when combined with a little gas-oxygen anesthesia during the more painful parts of the operation. Also to show the type of patient that may be operated upon, the young as well as the old, the neurotic as well as the phlegmatic, those where general anesthetics are contraindicated because of some pathological conditions, in times of epidemics infections, and upon patients who have taken ether before and wish to avoid its unpleasant effects.

Patients are seldom nauseated and may take fluids and nourishment by mouth from the first unless contraindicated by some gastric or intestinal work. There is less lowering of resistance as a consequence of which there is less local wound infection. Convalescence is shorter, the patient is out of bed sooner and able to leave the hospital in a shorter time.

The technique is not difficult and should be learned by all who do general surgery as it will mean lives saved and the lowering of mortality statistics.

BASAL METABOLISM AND THE GENERAL PRACTITIONER*

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In automobile language the thyroid is the ignition system of the body. Any increase or decrease in heat production, under certain conditions, is usually due to a corresponding change in thyroid activity. The two extremes of its activity are easily recognized. The picture of well marked Graves' disease and of the cretin are almost as familiar to the laity as they are to the profession. It is the border line case that gives the most trouble. Either a slight hypo- or hyper-

thyroidism is hard to recognize. In many cases only time and an increase in the disease process enable us to make a positive diagnosis. The same conditions that enable us to make a diagnosis render the treatment more difficult and the cure more uncertain. Up to date the best measure of the degree of thyroid activity is the determination of the basal metabolic rate.

Basal metabolism is a term used to indicate the heat production of the body under certain standard conditions; these being freedom from the influence of cold, food and muscular exertion. To meet these conditions the test is performed with the patient in the so-called post-absorptive state; i. e. about fifteen hours after taking food, so the test is made usually in the morning before breakfast. He is put to bed comfortably protected from the cold and allowed to rest at least thirty minutes before the test is started.

The basal metabolic rate is expressed in calories, either as calories per square meter of body surface per hour or as calories per twenty-four hours. We do not know why heat production should bear a constant relation to body surface area, but the fact is well established and of great convenience. For our knowledge of body area we are largely indebted to DuBois. He found that by taking nineteen measurements of the body and multiplying the various circumferences by the various lengths he could calculate the body surface area accurately. He constructed tables by means of which we can determine quickly the body area when the height and weight are known. This table is in general use today in calculating the basal metabolic rate.

Benedict and his associates felt that more allowance should be made for age and sex. They have constructed tables that take more cognizance of these two factors. In their calculations the basal metabolism is expressed in calories per twenty-four hours. This is perhaps more accurate and certainly more convenient.

There are two ways of measuring basal metabolism, the direct and the indirect. The direct method determines the heat production by actual measurement. The subject is placed in a large calorimeter chamber and the heat radiating from his body is carefully measured. The method is far too cumbersome and expensive to admit of its use outside of large hospitals or nutrition laboratories.

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Indirect calorimetry gives results almost or quite as accurate. The apparatus is comparatively cheap and its operation requires but one trained worker. It depends on the fact that a liter of oxygen produces 4.825 calories whether it is burned in the laboratory or in the human body. The heat production is calculated from the gaseous exchange—at this time largely from the oxygen consumption.

There are various types of machines on the market, most of which seem to do the work in a satisfactory manner. My work is done with a Benedict portable apparatus. It is a closed circuit type. The patient breathes into and out of a confined volume of air circulated by a small blower. This passes the air through a bottle of soda lime that removes the carbon dioxide as it is excreted by the patient.

In operation the patient begins breathing through the mouthpiece, the nose clip is applied and he is allowed to breathe for a few moments to allay his nervousness before the test is started. At the end of an ordinary expiration the height of the spirometer is noted and the test is begun. He continues to breathe into and out of the machine for a few minutes—ten or more—when the height of the bell is again noted and he is disconnected from the machine. In the Benedict the scale over which the indicator travels registers the amount of air in the spirometer bell at that height, so that one reads the contents in c.c. at the beginning and end of the period and the difference represents the oxygen consumed. This volume is corrected for temperature and barometric pressure and the consumption in c.c. calculated for twenty-four hours. From this we calculate the calories per twenty-four hours and the result is compared with the normal for a person of the age, height and sex of the patient. The difference is expressed in percentage as plus or minus. Variations of ten per cent. above and seven per cent. below are considered to be within normal limits. But this as every other test has to be correlated to the other findings, physical examination, history and the patient generally.

Certain conditions cause variations from the normal limits. Hyperthyroidism is probably the most frequent cause of an increased rate. Febrile conditions, leukemia with large numbers of white cells and acromegaly also cause an in-

crease. Hypothyroidism is the most frequent cause of a decrease in rate. Polyglandular deficiencies were also thought to be accompanied by a low rate but that does not seem to be the case.

Mrs. F. was a case difficult of diagnosis. In the late summer of 1919 she complained of such symptoms that neither I nor any of the consultants could be positive whether she had organic heart disease or hyperthyroidism. Six months later she returned to the city with a Graves' disease of such severity that both superior thyroid arteries were ligated. She had also developed glycosuria and her tolerance was only 30 grammes of carbohydrate. Following the ligation there was some improvement; her pulse dropped from 120-140 to 120-100 and her tolerance increased to 45 grammes. However she demanded a thyroidectomy. Her metabolism, which we had not been able to measure before was now found to be minus 4 per cent. In view of this and her clinical improvement two surgeons decided against operation. In four months from that time she was sugar free on a general diet, had gained 12 pounds in weight and her pulse was below 100 most of the time. In this case the basal metabolism was thought to be of some prognostic value as its return to normal preceded her greatest clinical improvement. At the time she was refused operation it was felt that clinical improvement would occur later as her basal metabolic rate had already improved.

Incipient tuberculosis is also hard to differentiate from hyperthyroidism. Many cases are sent to sanatoria every year only to be sent home when their rate is found to be 15 or 20 per cent. above normal. So far as known tuberculosis does not cause an increase. Organic heart disease, incipient tuberculosis and hyperthyroidism many times resemble each other very closely. A knowledge of the basal metabolic rate will enable one to decide with a great deal of certainty whether the thyroid is at fault.

Clinically it is often difficult to distinguish hyper- from hypothyroidism. As an example; last winter Mr. Wm. had the flu. His recovery was slow and after a time he developed tachycardia, a tremor, loss of weight and other symptoms of hyperthyroidism. A number of men saw him and all were more or less agreed that his illness had precipitated an attack of hyperthyroidism. A surgeon advised operation as soon as the

patient could stand it. Soon after this his basal metabolic rate was found to be 20 per cent. below normal. He recovered when given thyroid gr.i.t.i.d.

Recently Janney and Henderson called attention to "latent hypothyroidism." Most of us probably have such cases under observation. Mrs. G., 30 years of age, complained of various pains in her back, arms and hands. She had no pep, but little appetite and no ambition, wanted more sleep than the average person and indulged in a lot of bad dreams while getting it. Her family and past history seemed to have no bearing on her present trouble. She had a negative Wassermann and negative physical examination. She had a slight degree of anemia, her blood pressure was 110-70-40 and her urine was low in sp.gr. and urea. Her basal metabolism was 12 per cent. below normal. Her friend who referred her to me said that the patient's only trouble was that of many American women—too much money and time, too little responsibility and a too active imagination—and yet under the influence of thyroid combined with a little ovarian substance and small doses of pituitary she soon became able to take an interest in many things besides her own aches and pains.

By determining their basal metabolic rate many of these neurasthenics can be changed from bores for whom we can do nothing to interesting cases for whom we can do a great deal. No one is more appreciative than a so-called neurasthenic who has been cured. This test for basal metabolism is a measure almost strictly diagnostic and gives us exact and valuable information where formerly we had none. It in no way relieves us of the responsibility of taking case-histories and making the usual physical examinations and laboratory tests. In fact the finding of a basal metabolic rate outside the normal limits should, in many cases, stimulate us to make a more careful examination and a more detailed inquiry into the patient's history, especially the family history and the developmental period of the patient's life.

Many cases of hypothyroidism can be traced to infancy. Babies suffering from lack of thyroid are apt to be larger than the average at birth. The cord heals slowly or a so-called infection of the cord supervenes which is very resistant to

treatment. The teeth erupt late and walking and talking begin much later than usual. A baby that does not walk a few feet and say a few monosyllables by the end of the fourteenth month should make one very suspicious that its thyroid is not functioning as it should. The fact that rickets is given as a cause of the delay in walking in no way excludes the thyroid from blame; frequently it is the cause of the rickets. Many of these hypothyroid children are the defectives seen in the early school years. There is usually a very early development of the primary and secondary sex characteristics. The mammae are well developed at the age of ten or twelve and the periods begin at thirteen. The menstrual periods are peculiar in their regularity, freedom from their local or general signs of dysmenorrhea and in the profuseness of the flow. These individuals are apt to be short and stocky and the distribution of their adipose tissue is quite characteristic. They are usually fat all over but especially is there a good deal of cuffing about the wrists and ankles. Many of the girls whose legs are the same size from the knee to the ankle have a considerable degree of hypothyroidism. This is in direct contrast to the hypopituitary individual who has a deficiency either of the posterior lobe or of both lobes. In these the adiposity is of the girdle type. They may have very large hips and abdomens but the adiposity stops at the middle of the thigh and the ankles are quite shapely.

Most cases of deficient thyroid secretion are accompanied by a basal metabolic rate below the normal limits. This is much less frequently true of deficiencies of either the gonads or of the pituitary. Even well developed cases of lowered activity of these glands are accompanied by a normal rate.

Carbohydrate tolerance which is another gross measure of metabolism is usually decreased in hyperthyroidism and increased in the hypothyroidism of the gland. This also is not true to the same extent of the gonads and the pituitary. Men who are doing a large amount of work with these tests feel that the determination of the basal metabolic rate is a much more accurate measure of the activities of the thyroid than any other test in use at this time. They also feel that this will perhaps put a different interpretation on the Goetsch epinephrin test. He felt

that a patient who responded positively to this test should have part, at least, of the thyroid removed. It is coming to be held that this reaction only shows that the patient has a sufficient amount of epinephrin in his economy and is not in any need of suprarenal medication.

As general practitioners a knowledge of basal metabolism is of special value. We see these cases early and if we can make a diagnosis promptly and institute proper treatment they may never reach the stage where the specialist is called. If the specialist is called in we have made the diagnosis and no one can complain that his life might have been saved if only Dr. So-and-So had been alive to the situation. We probably overlook the hypo condition oftener than the other and this is the condition offering the greatest opportunity for brilliant cure. We see more of these endocrine disturbances than was formerly believed and many cases that are not endocrine in origin have an endocrine phase and are benefited by some medication along those lines.

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REFERENCES

- Engleback, Wm.: *Medical Clinics of North America*, Nov. '20.
 Tierney, John L.: *Medical Clinics of North America*, Nov. '20.
 Means, J. H.: *Medical Clinics of North America*, Jan. '20.
 DuBois: *Medical Clinics of North America*, Jan. '20.

IS PROGRESS BEING MADE IN CONTROLLING VENEREAL DISEASE?*

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Until two years ago no concerted effort had been made to control venereal disease among the civilian population of the United States. It is true that the ground had been broken to some extent by social hygiene associations here and there, but the problem had been attacked by them entirely from the social side and not from the medical. The greatest ignorance concerning the dangers, means of contagion and prevalence of these diseases existed at this time; and a competent and thorough course of treatment, for syphilis at least, was far beyond the reach of a man of ordinary means. This meant that for the most part venereal diseases, except among the more affluent classes, went untreated or were in-

effectively treated with patent medicines. It is this state of affairs that we must have in our minds as a background when we answer the question, "Is progress being made in controlling venereal diseases?"

Two years ago on July 1st next, the division of venereal diseases of the Public Health Service was created primarily in order to aid the states in developing a plan for the control of venereal diseases. At the same time \$1,000,000 a year for two years was set aside to be distributed under certain restrictions to the states, in varying amounts according to population, to be used for this purpose. The immediate cause of this action was the prevalence of venereal diseases disclosed by routine examinations of drafted men.

It was realized at the time that the problem of venereal diseases was manifold, that a program dealing with it in a narrow one-sided way was doomed beforehand to failure, that law, medicine, and education must all three combine for its solution and that a concerted attack from all sides must be undertaken and carried on over a series of years before it would be possible to speak of success. Not two years ago this three-fold plan was inaugurated with legal, medical and educational aspects, and since that time the Public Health Service has co-operated with the state boards of health in putting it into effect.

The situation today in comparison with that which existed in the early part of 1918, may be most briefly summarized as follows: Whereas, two years ago treatment for syphilis was beyond the means of the average man, today there exists a network of 500 odd clinics stretching from coast to coast where free examinations are carried out and where free treatment for gonorrhea and for syphilis is given. Moreover, such treatment is in general competent and conforms to certain standards. Laws have been passed in various states making venereal diseases reportable, regulating hotels and rooming houses, dance halls and taxicabs, and prohibiting the sale and advertisement of quack remedies for venereal diseases. A widespread educational campaign has been carried on through the medium of placards, pamphlets, newspaper publicity, exhibits, lantern slides, lectures and motion pictures to inform the general public, and also selected classes of people such as industrial workers, druggists, etc., of the

*Read by Dr. Daisy M. O. Robinson, U. S. Public Health Service, at the 70th Annual Session of the Illinois State Medical Society, at Rockford, May 19, 1920.

dangers of venereal diseases and the necessity for early and thorough treatment.

A promising beginning has been made in the work of venereal disease control. There has been created an organization functioning throughout the United States which enables any venereally infected person to secure treatment free of charge. Many states have passed laws limiting prostitution and, therefore, limiting the spread of syphilis and gonorrhea, and the public has to a certain extent at least been educated concerning the venereal diseases — which before this campaign were considered a subject taboo both for conversation and literature. Undoubtedly, however, there still remains a long road to travel before venereal diseases become a negligible factor in public health work!

It is the aim of the following paper, after this brief review of venereal control throughout the country, to sketch the progress that has been made along this line by the State of Illinois in particular, to suggest avenues of development for the work in this state for the coming year, and to point out the great service that the physicians of Illinois may perform for their state and for the country at large by their enthusiastic co-operation in the campaign against gonorrhea and syphilis.

There are twenty-six cities in Illinois with a population of over 15,000 each. There are also twenty-six clinics in Illinois where free treatment for venereal disease is obtainable. Seventeen of these twenty-six clinics, however, are located in Chicago. It is usually considered advisable that there should be a free venereal clinic in every city of over 15,000 inhabitants and in a number of states this is in fact the case. To attain this standard in Illinois there should, therefore, be 20 new clinics established. It must be kept in mind that the aim of these venereal clinics should be not only to give facilities for free treatment, but to furnish a center for the dissemination of educational information relative to venereal disease.

As yet little work along the lines of venereal disease control is being done in the twenty cities without clinics, so it is deemed best to discuss conditions in the six cities where there are established clinics and where definite accomplishments have been made.

These six cities are as follows: Chicago, De-

catur, East St. Louis, Rockford, Chicago Heights, Springfield. It must be remembered when judging results that Illinois with her big foreign population has one of the most difficult problems to handle of any of the states. By state law in Illinois venereal diseases are reportable by physicians and the sales of venereal disease nostrums are reportable by druggists.

Chicago. In Chicago alone, as has been noted, there are seventeen clinics where free treatment for venereal diseases may be obtained. Many Chicago physicians are reporting their cases to the State Health Officer, but it is evident from the figures that all are not doing so. The majority of druggists, as well, have given aid by agreeing to discontinue the sales of venereal disease nostrums. Another important aspect of the medical program is the examination and treatment of persons charged with sex offenses. Such procedure is carried out in Chicago, but the enforcement in the case of men is less strict than in the case of women, which procedure is not warranted by the law. A mental examination of prostitutes is also carried out and those found to be feeble-minded are, so far as possible, institutionalized.

A great deal of excellent education work has been done in Chicago.¹

There is a city ordinance prohibiting prostitution and ordinances regulating dance halls and taxicabs. Another ordinance forbids the advertising of nostrums. Conditions in Chicago are believed to be much improved, compared to what they have been, although there are still some known houses of prostitution and, of course, a large number of prostitutes.

Decatur. Decatur possesses a whole-time health officer and a clinic treating 38 patients per day at the low per capita cost of 34 cents. Many, but not all of the physicians of this city, are reporting, and where the source of infection is given, the person is located, examined and forced to take treatment. Sex offenders are sometimes, but not always, examined for disease.

An educational campaign has been conducted here, pamphlets distributed, placards posted, lectures given, and the city has co-operated in the "Keeping Fit" campaign.

1. Through the State Board of Health approximately 450 lectures have been given, reaching over 100,000 people; a most commendable means of securing the desired results in this important field of work.

This city possesses model ordinances. These include an ordinance prohibiting prostitution, dance hall and taxicab ordinances, and one prohibiting the sale and advertising of venereal disease nostrums. There is authority to quarantine persons infected with venereal disease and this authority is enforced. Sex offenders are examined for venereal diseases. There are no known houses of prostitution in the city.

East St. Louis. There is a clinic here treating 20 patients a day at a per capita cost of 70 cents. Though some of the physicians are reporting their cases, not all are doing so, and druggists are not reporting on sales of nostrums. The advertising of venereal disease nostrums is, however, prohibited by city ordinance. Sex offenders are examined before trial and are treated. It is unfortunately possible, however, for them to obtain liberty before examination by furnishing bond.

A good deal of educational work has been done here, 500 placards posted, pamphlets distributed, lectures to general audiences and motion picture showings.

There is an ordinance prohibiting prostitution, a dance hall ordinance and an ordinance against the advertising of nostrums. Authority also exists to quarantine persons infected with venereal disease, but this is only sometimes enforced. There are known houses of prostitution in the city.

Rockford. In Rockford there is a clinic with a per capita cost for treatment of \$1.84. The daily attendance averages about seven which is not nearly as many as the clinic can handle. Physicians are reporting their cases of venereal disease, but only to a limited extent. Sometimes the source of infection is given and these people are then investigated and made to take treatment. Women arrested for sex offenses are examined for gonorrhea, but not for syphilis.

Two hundred and fifty placards have been posted and pamphlets have been distributed.

There are ordinances in Rockford prohibiting prostitution and regulating dance halls. There is also an ordinance prohibiting the sale and advertising of venereal disease nostrums. The former of these, however, does not seem to be enforced. Authority to quarantine persons infected with venereal disease exists, but this is not enforced. No known houses of prostitution

and but a very small number of commercial prostitutes are to be found in the city.

Chicago Heights. A clinic was opened here on February 1, 1920, and, of course, this has functioned as yet to a limited extent only. The per capita cost is at present \$2.30 and the daily attendance is four. Physicians here are not reporting to any extent and neither are druggists reporting on sales of nostrums.

Quite an educational campaign has been carried on in Chicago Heights. Placards, pamphlets, lectures and motion pictures have all been used.

There is an ordinance prohibiting prostitution and one regulating dance halls. There is also an ordinance prohibiting the advertising of venereal disease nostrums, but this does not include the newspapers. Authority exists to quarantine persons infected with venereal disease, but this is not done.

Several houses of prostitution are known to exist. Prostitutes are treated while confined for sex offenses.

Springfield. There is a good clinic here, treating 20 patients per diem at a per capita cost of 62 cents. Some few physicians are reporting, but the greater majority are not doing so. On the reports that are made the source of infection is given and an investigation is carried out. Druggists are not reporting on sales of nostrums. Persons charged with sex crimes are examined after conviction, and a mental examination is also made, but there is no attempt to institutionalize feeble-minded prostitutes, although an institution for the feeble-minded exists.

Educational placards have been posted and the Y. M. C. A. has done some educational work with boys.

There is an ordinance prohibiting prostitution and there is authority to quarantine those infected with venereal disease, but this authority is but seldom enforced. Ten houses of prostitution exist and a large number of commercial prostitutes.

It is evident from the above sketch that although a beginning has been made there is still an immense amount of work to be done in venereal disease control in the State of Illinois.

The physicians of Illinois should realize that they can be of tremendous aid in furthering the progress of venereal disease control in their state

both by direct methods and by helping to form an educated public opinion.

There is no need to point out to physicians, as there sometimes is to laymen, the tremendous importance and the far-reaching effects of venereal diseases, the large proportion of deaths and disability caused by them, and the way in which they insidiously undermine the general health of a community, paving the way for other infections. It is a truism to state that no infectious disease is controllable until it is known with exactitude to what extent it exists in different localities and among what classes of people it is prevalent. These facts can only be discovered in the case of the venereal diseases by having accurate and complete reports of all cases sent in to the state health department by all the physicians in the state.

The reporting of cases of venereal disease is required in Illinois by state law and yet it is quite clear from the small figures that many physicians are not reporting at all, or that they are not reporting all of their cases. This is made plain by comparing the number of cases reported with the incidence of venereal disease as found in the compulsory draft examinations from Illinois. The records from Illinois for the last six months of 1919 are as follows:

July1,435 cases of venereal disease reported
August ...1,692 cases of venereal disease reported
September 1,895 cases of venereal disease reported
October ..3,332 cases of venereal disease reported
November 3,847 cases of venereal disease reported
December 3,026 cases of venereal disease reported

Total cases reported in Illinois July-December, 1919—15,227.

In the *Social Hygiene Bulletin*, April, 1920, an article appeared in which an attempt was made to calculate with some degree of accuracy the reporting efficiency of the various states. The method used was stated as follows:

To estimate the total number of cases of venereal disease at a given time, the estimated population of each state on January 1, 1919, as furnished by the Census Bureau was multiplied by the percentage of venereal infection found in the men of that state drafted in the second million. The ratio between the estimated total cases and the reported cases for each state was calculated and the result expressed as a percentage.

By this method the figures secured for Illinois were as follows:

Estimated population of Illinois Jan.
1, 19196,359,103

Total cases reported July 1, 1918
to June 30, 1919..... 16,915
Percentage of infection among second
million men3.26
Estimated total infections in the state.337,032
Percentage of reporting efficiency.....5.0

No special accuracy is claimed, of course, for these figures, the percentage of venereally infected persons who do not consult a physician not being taken into account, but the figures should be fairly accurate in demonstrating the relative reporting efficiency in the various states. In the list compiled from this data Illinois, with a reporting efficiency of but five per cent., stands twenty-first on the list. In other words, twenty states have a greater reporting efficiency than Illinois.

If, however, we compare the number of cases reported during the year ending June 30, 1919, with the figures showing the number of cases reported from July to December, 1919, we find about an equal number of cases, showing that the reporting efficiency of Illinois was doubled during the last six months of 1919.

The physicians of Illinois should resolve to raise this percentage further so that Illinois may take her place among the best reporting states.

Many physicians have formerly been opposed to reporting, regarding it as a breach of professional ethics. As cases in Illinois are, however, reportable by name or number there is in point of fact not the slightest question of a violation of confidence. Only in case of the patient discontinuing treatment without permission, is it necessary to disclose the name and address to the Health Department. Then, for the sake of public safety, representatives of the Department should hunt up the delinquent patient and insist that treatment be continued.

A second, and equally important way in which physicians may aid in venereal disease control, is by forwarding all movements for the establishment of clinics and by sending indigent patients for treatment to those clinics which have been established. In some cases physicians have been known to be antagonistic to clinics fearing that they might decrease their legitimate practice. There is no more reason for physicians to fear a free clinic than there is for them to fear a hospital dispensary. Clinics are only intended for those utterly unable to pay the current and often exorbitant fees for extended courses of treatment

and the physicians in charge should, and do, refer those who can afford to pay reasonable fees, to reputable specialists.

On the other hand, there are several ways in which the clinics in their turn may be of service to physicians. In the past many public-spirited men have treated at their own expense, patients suffering with venereal diseases in a contagious stage, who were unable to pay for treatment. These physicians are now able to refer such patients to the free clinics and so with a clear conscience, avoid a serious financial burden. Moreover, the laboratory service offered by clinics should be a valuable diagnostic aid to physicians. It is possible for a physician to send specimens of blood, etc., to such a laboratory for examination when he has not himself adequate diagnostic facilities.

Another direction in which Illinois physicians have been of service and can be of further service, is by using their influence with druggists to urge them not to sell nostrums for the treatment of venereal diseases, or at least to report the sales of such nostrums, so that those who buy may be followed up and urged for the sake of the community to take treatment and so to be rendered non-infectious.

In most communities there are sufficient laws to curb open prostitution and the great need in Illinois as elsewhere is for more efficient law enforcement. Let the physicians be among those who demand that such laws be not a dead letter. No one knows better than they do the connection between prostitution and disease. The enlightened physicians of the state should be the ones to lead public opinion to demand examination and treatment for men and women held for sex offenses, to demand asylums where the feeble-minded prostitutes may be segregated and institutions where those who are not mentally affected may, through a process of rehabilitation, be rendered fit to take their place in society.

Illinois has made progress in venereal disease control during the past two years, but beginnings are hard and to Illinois this problem has been a difficult one. If, however, the physicians of Illinois would lend their whole-hearted aid during the coming year there is little doubt but that their state could take her place as first instead of twenty-first not only in efficiency in reporting, but in venereal disease control work.

DISCUSSION

(Abstract)

Dr. Rachele S. Yarros (Chicago), commended Dr. Pierce for emphasizing what is to be done in the future, but suggested that Illinois leads in education, one of the most important features in the campaign for the elimination of venereal diseases.

From the very beginning of the social hygiene movement, Illinois has led in the education of venereal people. She points out that we undertook the educational campaign that has been carried on by voluntary agencies, taken over to a great extent by the Public Health Department during the first of February, 1919. Until the first of May of 1920, 1,200 lectures were given, a number that was not exceeded by any state in the country. These 1,200 lectures reached 200,000 people, and then in Chicago we gave 459 lectures, reaching 71,000 people. We have gone all over everywhere including the smallest communities of the state, and there is where we found the most important need of this work; those people hadn't the slightest notion that they have venereal trouble.

You first must teach the danger of venereal disease before applying for treatment. That has to be done in every line of work and it is being done in Illinois under the State Department of Public Health in the most interesting way. We not only reach club women and those who are willing to listen, but under this authority of the state we have permission to lecture in the factories, stores, banks, and all kinds of establishments and on the employer's time, because then we find the people. It is exceedingly interesting to hear these hundreds of men and girls who work in the factories say, "Tell us where we can go and have treatment." That means first of all, that education is one of the most important things to awaken people to the need of treatment. The next is where to apply for proper treatment. The clinic is only one agency because a great many people don't go to clinics, but clinics are absolutely essential, because they are there constantly to remind the community of the presence of venereal disease. We have had difficulty in Illinois because our physicians have been too busy to think about the clinic's future.

It is essential that the State Department of Public Health and the doctors should co-operate. Wherever we go we have to have the doctor help us to get a community properly educated, to see that they have the proper treatment and to help in the enforcement of the laws.

We want to stand first, we are standing first in some ways but it isn't known. We are going to stand first because the physicians of Illinois are the most energetic, and if they know what they want, they can do it and do it right.

Dr. Latimer (Chicago), said he had been asso-

ciated with venereal clinics the last ten years, and believes that all the medical men believe in this propaganda and the educational campaign that is being carried on. Various paid clinics established in Chicago, for instance, with financial backing have men who practice medicine outside; that is the thing that gets opposition from the physicians in the town.

The difficult thing for the general clinics is to weed out the paupers. Paupers are entitled to this treatment. Every physician will give them charity, I am sure, but any clinic, especially a paid clinic, wants that money. Most of these men are only part time men; they go there a couple of hours a day and they get a small amount of money for it and they depend on this money for their personal use. Working people who can pay legitimate physicians and get the best sort of treatment you will find getting free treatment and taking up the physician's time in charge of it, and that is the thing that is causing kicks from the outside practitioner.

Dr. C. St. Clair Drake: There is undoubtedly a good deal of truth in what Dr. Latimer says, but the clinics that Dr. Latimer refers to are not the clinics of which the State Department of Public Health has the least control; they are the clinics that are operated entirely independent of any state control. We have a very definite policy with respect to the operation of the clinics maintained or aided by the state.

First of all, a clinic will not be established in a local community until the local community medical society gives its approval to such establishment. Then, when the clinics are established, they must operate under these conditions: They must first ascertain whether the patient is able to pay for the treatment he seeks. If he is able to pay for the treatment, even in part, he must be referred to the practicing physicians of the town who are willing to accept those cases. The clinics must have in their possession a list of the physicians of the town who are willing to accept such patients and the patients must be referred to these physicians in the order that they are listed and in the order that they apply.

Dr. Griffiths (Chicago). They will send a patient to a doctor, somebody perhaps who is expert in treating gonorrhea or syphilis and he will give a prescription and the druggist will get that fellow's prescription and he will treat two or three hundred patients from that prescription. Some patients don't go to doctors at all.

He has a son in the senior class of grammar school and had him read a paper on gonorrhea and syphilis and then quizzed him on it. He believes that education should be given the senior class of the grammar school.

Dr. Smith (Chicago), asked a question: You say that there are 17 clinics in Chicago. Under what jurisdiction are those clinics run? What are

the sources of money, so far as you know, for the maintenance and support of these clinics? Why should not those be maintained by the municipal authorities exclusively? In that way I think we have a minimum chance of unfair management of these cases that apply directly to their clinics where proper investigations cannot or are not made.

Dr. McClanahan (Mercer), said he knows a doctor in the city of Peoria who treats a great many cases and who has a tremendous expense himself. He treats poor working girls there for syphilis and gives them mercury and everything and never gets one cent. Isn't that a fine thing for those girls and that city? You are taking too selfish a view, Dr. Latimer.

Dr. C. St. Clair Drake. With respect to the dispensing of venereal prescriptions and venereal nostrums in drug stores, the State Department of Public Health is conducting a very accurate propaganda against it. In a number of cities in Illinois, with the co-operation of the Rotary Clubs and the local Chambers of Commerce, we have been able to secure the signature of every druggist in the town to a contract not to give any venereal remedies over his counter except upon a prescription written by a physician. We have been able to accomplish that in a number of communities. We are working along those lines just as rapidly as we can. From our investigation we learn that fully sixty-five per cent of the venereal infected persons have applied to the druggist for their treatment. We are getting that sixty-five per cent out of the drug stores just as rapidly as we can and into the physicians' office where they may get the proper treatment.

As far as the Chicago clinics are concerned, there are four clinics in Chicago that receive aid from the state that operate entirely under the jurisdiction of the Chicago Health Department. There are two other clinics in Chicago that get aid, one is at the Rush Dispensary and the other is the Illinois Social League clinic. We know nothing about the other venereal clinics in Chicago. Every one must operate according to the plans enunciated by the State Department of Public Health. If they fail to do so, the financial aid that we extend to them will be immediately discontinued.

Dr. Daisy M. Robinson (Closing discussion): I think all the questions have been answered, but I want to say that the State of Illinois, in my opinion, is to be congratulated on their splendid Public Health Department, whose officials so thoroughly understand the scope of their work. Comparing the work with what I have seen in a survey in other states, I would really say that Illinois is taking a leading part in an educational line. The figures as given by Dr. Yarros are excellent so far as education is concerned, and I think that it would be advisable to look into the matter; there must have been some misinformation given, be-

cause with the large number of lectures and the number of people that have been reached in the State of Illinois, I feel that your education has absolutely permeated the state and that you are doing a great deal of excellent work in this line.

INTRAVENOUS CHEMOTHERAPY*

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Chemotherapy dates from the first time that chemicals were used in the treatment of sick people and is probably the most ancient form of therapy now in vogue, and from the time medicines were used in the healing art, practitioners have been searching for specifics, or a remedy which would unfailingly cure the various ailments that human beings are heir to. In that search every chemical known and a great many combinations of chemicals have been tried and found wanting as far as being specific is concerned, for until very recent years but two remedies had been worthy of being regarded as specifics, quinine for malária, and mercury for syphilis.

With discoveries in bacteriology of the etiologic relationship of various microorganisms to certain diseases, came test tube experiments to demonstrate that certain substances quickly and easily destroyed these things, but the experimenters soon became aware that conditions in the body were entirely different from those in the test tube and that germicides, even when given in quantities large enough to endanger the patient's life, did not destroy the microorganism causing the trouble.

Then in the latter part of the eighties it was discovered that the blood itself had germicidal properties which brought on the intravenous method of treatment and while the last few years show an increased number of the profession using this mode of treatment, they are still far in the minority.

While this is a comparatively new form of therapy, there has been a vast amount of research work and experimenting done to find more specifics, with the results that after all, very few remedies have a germicidal action in the body, and those have been classified in three main groups:

1. The group of arsenical compounds of which the popularly known 606 is the chief;
2. Certain azo dyes of the benzidin group;
3. The group of basic triphenylmethane dyes.

The goal which all research workers and experimenters hope to achieve is to find or produce some chemical substance that will not unite with the blood albumin or body cells, but which will have a germicidal action on the microorganisms causing disease and be capable of killing them in the living body. This line of work finally culminated in the discovery of the 606 which in itself constitutes a great triumph for medical science in two ways, it gives us a very valuable remedy for the treatment of syphilis and it demonstrates the truth of a principle which has opened up vast possibilities for future investigation.

My work being mostly with tuberculosis, naturally like all other special workers I have been trying to find some substance or chemical which has a special affinity for the tuberculosis bacilli and at the same time is harmless to the body cells. This substance must not only exert a germicidal action upon the bacilli without injury to the body cells, but it must also have the property of being able to pass through tissue and penetrate avascular regions in order to reach the bacilli.

I began experimenting with several of the dyes and different combinations of them and finally centered on one of the triphenylmethane group as being the one offering to me the least objections and the greatest possibilities. The greatest objection I found was the phenol element in it and I began to work to remove this and finally evolved one which is probably an hexamethyl dye.

The toxicity has been tested on guinea pigs and it takes a solution ten times as strong as the one I am using and double the quantity to kill a pig.

I have now under observation patients that have been at home four years and are still in good condition and following their usual vocation without showing any indications of their ever having had tuberculosis.

My attention was drawn to various dyes on account of the manner in which the tuberculosis bacilli received them, and once receiving them, refused to part with them; also to the fact that a stained bacillus is a dead bacillus.

*Read before Southern Illinois Medical Association, Carbondale, Nov. 4-5, 1920.

The solution may be administered to any kind of case, regardless of the advancement, without danger of general reaction; at least, I have never seen one and I have given several thousand injections. The only trouble I have ever had was in a patient where the needle went through the vein and I withdrew the needle and entered the same vein about four inches lower, gave her 125 c. c. without causing her any particular discomfort and when I had finished the treatment noticed that her arm had swollen considerably and upon examination found that a great deal of the solution had leaked out of the first puncture and into the arm. Her arm was very badly swollen for about two weeks, but did not cause her a great deal of pain; in fact, she complained only of a stiffness and heavy feeling. This condition subsided and her arm got well without causing any abscess or sloughing and in about four weeks was entirely well. Since then when I puncture a vein and am unsuccessful in giving the solution I use another vein for the next puncture.

There is no danger of giving a patient too much of this solution outside of the vein at the site of the first puncture as it is impossible to endure the burning sensation it causes and the pain is so severe that you know immediately whether or not the solution is running inside the vein. If it is inside, the patient does not feel it at all, but quite a few can taste it, although I never did and I have taken six of them. Another thing that shows on some of them and not always on them is the discoloration of the urine shortly after receiving the treatment and in nearly all of them it shows through the skin while they are receiving it causing them to have a pale bluish appearance somewhat resembling a person who is chilled, but this soon disappears and in three or four minutes after the treatment is completed, they assume their natural color.

The results I am getting can not all be psychological nor yet all due to the general sanitarium care because I am getting reports from other men that are using it in private practice and they are similar to mine. One man of St. Louis told me it was rather unusual for his patients to gain five pounds per week and as the results are so uniform, I think we must give the solution credit.

In one miliary case alone the results were so pronounced and could be attributed to nothing else that I am going to report it.

Mr. James Gray from Woodriver, Ill., had a diagnosis of miliary tuberculosis made at the Barnes Clinic in St. Louis, February 4, 1920; prognosis, very grave.

He made application for admission to the colony through the Madison County Antituberculosis Society, but at that time there was no vacancy and he could not be received. He waited at home until February 29, when he took it upon himself to come to the colony any way. He was in such bad condition it would have been dangerous to send him home, so we crowded him in and made the most of a bad bargain. He had a fetid bronchitis and the odor from his breath when he coughed was sickening and almost unbearable to the other patients. I determined to give this man an intravenous injection of 125 c. c. every week until he died, then get a post mortem in order to get some of the tubercles and see what had happened to them.

After the first injection the odor from his breath diminished and after the second one it disappeared entirely and the man began improving. In the first six weeks he gained twenty-four pounds. After the man started improving I thought perhaps there had been an error in diagnosis and at the end of four weeks I took him to Dr. Young's x-ray laboratory in East St. Louis, where a stereo was made and the diagnosis was confirmed. I took him back again in four weeks and again four weeks after that, each plate showing the improvement that had taken place, and the tubercles remaining as numerous as ever. The society which had been maintaining him at the colony ran out of funds and he left me July 1, 1920, and returned to Woodriver, where he is at present working every day at the oil refinery. His weight increased from 136 pounds to 172 pounds and he is without a sign of a cough now, or was when I had another plate made several weeks ago. I intended having this series of plates to show you the different stages of improvement shown in that man's lungs, but unfortunately Dr. Young was taken sick shortly after making the last one and is still in the hospital.

I do not see how anything else but this solution can be credited for this man's recovery as he said he had just as good a bed at home, just as good attention, and just as good air and everything else he had at the colony.

In the last summer I also treated four severe cases of furunculosis successfully with this solution. One especially interesting case was a young lady nineteen years old, from Tennessee, who had had successive crops of boils for two years and eight months, and had, to use her own expression, "taken enough medicine to stock a drug store" besides a number of vaccines. Her body was and still is, very liberally decorated with scars from those boils from her heels to her scalp. She was given four injections of 125 c. c. each every

seven days and her boils disappeared and up to last week when I last saw her, she was still free from them; the last she had was in the first week of July; previous to that time she was never as long as two weeks without their company.

The other three cases were of much shorter duration, one running three months and two of them for three weeks, each one of these cases receiving only two injections and up to last week had had no recurrences.

THE COMMITMENT AND CARE OF THE INSANE*

H. J. GAHAGAN, M. D.

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CHICAGO

Legal commitment of the insane to the existing State Hospitals is a medieval custom which should be modified. The commitment of the insane by legal process is directed by economic necessity, and it should apply only to economics or the legal status of the property of insane persons, and not under any circumstances be found in the way of the patient's early admission to the care of experienced physicians in hospitals equipped for the care of those disturbed in mind.

The very necessity of commitment in these cases causes the physician and the family of the patient to hesitate before placing the patient where he can best recover.

It is not improbable that were legal commitment unnecessary to admit the patients to the State Hospitals their friends would earlier resort to these institutions for advice and treatment.

The Open Door Psychopathic Hospital at Albany received many patients on their own volition. Some of these patients became violently and permanently insane, but many of them recovered, so large a proportion indeed that the Boston Psychopathic Hospital¹ was established to receive voluntary and committed patients, both in the acute and earlier stages of the disease. The Temporary Care Laws of Massachusetts provide that any reputable physician may by making out a request on a prescribed form have an individual

who is suspected of suffering from a mental trouble, sent to the Psychopathic Hospital and detained for a period of ten days for study, without legal formality.

During 1919, 1466 patients or 77.9 per cent of the admissions were temporary cases.

The Voluntary Commitment Law is enforced in fifteen states. Nine of these states admit the patient without a physician's certificate, four require a certificate signed by one or two physicians and in two of the states the patient must have a certificate signed by the county judge. The patient may leave the hospital by giving the superintendent a three days notice of his intention. In Illinois the voluntary request must be signed by the county judge. There is also a provision in the Illinois law in which a patient may be placed in a state hospital for observation for a period of ten days. If the relatives would advise the patient of these laws, the preliminary features of legal commitment could be avoided.²

The method in vogue at the Cook County Psychopathic Hospital obviates the necessity of a lay jury, the medical commissioners merely certifying to the findings of the Psychopathic Hospital staff. The patient is not exposed to the morbid curiosity of the general public. This is laudable and humanitarian.

Let us see what is necessary for the final admission of a mental case to a State Hospital.³ A certificate of a physician must be presented to the clerk of the County Court, and a complaint filed by some citizen that the individual is unsafe to be at large. A writ is served on the patient by the sheriff and is taken by that officer to the Psychopathic Hospital or some other place where he can be presented before the county judge, before a mixed jury or medical commission. Representatives of the sheriff and county clerk are present. Interrogatories covering the private life of the patient are filled out and filed for public inspection.

If the individual is declared insane, commitment papers are made out, signed by the county judge, county clerk and the commission or jury, and the sheriff, armed with warrants, presents the patient at the State Hospital. The superintendent of the hospital signs one of the warrants acknowledging the reception of the patient, the sheriff signs the other warrant acknowledging the delivery of the patient to the hospital, and from

*Read before the Chicago Medical Society, February 2, 1921.

thenceforth the superintendent is held responsible for the patient's detention.

It is a crime for a person to lose their mind, and there is as much legal atmosphere in the case as in that of a prisoner being committed to prison. In keeping with these medieval laws, the superintendent of the hospital took every measure for the safe keeping of his charge, and in accordance with the popular idea of detaining the insane, built four and five-storied asylums with barred windows, locked doors, and padded cells, for the safe keeping of the patient, eliminating any possibility of an escape. Camisoles, muffs, cuffs, anklets, strong suits, covered beds, chains and other inhuman paraphernalia were freely distributed, adding additional misery to the unfortunate.

Illinois⁴ took the lead in dispensing with these inhuman methods, it being my pleasure as superintendent of the Elgin State Hospital to remove the bars from the windows and discontinue all extreme measures. An order of the Board of Administration shortly afterward dispensed with restraint in all of the institutions of the state. Greater freedom to the patient followed the initiation of these humane methods; wards were thrown open, parole of the grounds was freely permitted and many patients allowed to visit in the city without an attendant. Trained female nurses were placed in charge of male patients, woman patients were granted parole in groups of three or more.

As a result of this greater freedom and liberal policy, escapes were more frequent, and occasionally a crime would result, criticism was rife, and scareheads in the newspapers warned the public of a wild man being at large.

The World War with all of the misery, broken hearts, and sorrow for which it was responsible, did many things through the medical department of lasting value. As the recruits reached the cantonments, many were found to suffer from mental disease, stockades were built and all the old methods of restraint were insisted upon until the⁵ National Mental Hygiene Society interceded. To the surprise of the lay officers it was demonstrated that these inhuman measures were not necessary, and the mental patients were cared for under the same roof with the medical and surgical cases. Particularly was this demonstrated at the Walter Reed Hospital in Washington.

Work has been the main feature of therapy, and from the pure shop and group features there has been evolved the personal feature, the stimulation of the deteriorating type, so that occupational diversion has been replaced by occupational therapy. In other words, the reclamation of the apparently hopeless to a field of usefulness in the institution and adjustment for the stern realities of outside life.

The untidy ward or cottage has always been the blot, toward the effacement of which every superintendent has given much thought. Thirty-five per cent of the admissions are those of dementia praecox, and by reason of that most prominent symptom, lack of interest, the victim is ultimately sent to the untidy ward. Lack of interest in the individual becomes infection, and the microbes spread to those in charge, the problem becoming serious for humanity.

It was this state of affairs that prompted an experiment. I chose twelve women patients of the most deteriorated types, mute, resistive, negativistic, untidy, all of whom had to be spoon fed, dressed and undressed, and placed them in charge of an exceptionally intelligent and humane nurse, a former school teacher. Kindergarten methods were pursued, habit training, school work, fancy work, interspersed with music, games, dancing, skating, golf, tennis, etc., being the schedule for the day. Daily progress of the work of each patient furnished a marvelous lesson of the fruits of personal attention.⁶

At the end of five months nine of these patients had improved sufficiently to co-operate in the ordinary routine of ward life, three of the number ultimately adjusting for parole to their homes. Thus occupational therapy was initiated in the Illinois State Hospitals. The work of these patients was exhibited at the meeting of the American Medico Psychological Association at the annual session in New York City in June, 1917. Occupational therapy has had rapid strides, schools for teachers have been opened in various states—many in the state hospitals, from which the intelligent type of nurse became the most efficient. The experience of the World War has indicated the merit of occupational therapy in the great work of reconstruction which is still in progress.

To attain the best results in the institutional care of the mentally affected, the atmosphere and

environment should be adjusted to fit homelike surroundings. These people are taken from their homes—humble in most instances, but still a home—and they are entitled to every consideration for their betterment. The patient should be housed in one-story cottages, well furnished, with pictures adorning the wall, well selected, with flowers and plants, good reading material, musical instruments and games for their amusement. Good food properly cooked and served hot is essential. Table cloths changed daily, white china dishes should adorn the table, with a knife and fork supplied to every patient in the hospital. Table ethics can be best cultivated under these conditions. There should be no evidence of bars on the windows or doors and with 75 per cent of the population the doors of their quarters leading to the halls and grounds may remain unlocked.

It is surprising how obedient mental cases are to authority, and it is seldom a rule is broke when the patient is humanely treated. Mental patients like pretty things, a pretty dress, a ribbon, a flower will subdue the desire for destructiveness in the most acute cases. This was best exemplified during the Christmas holidays as on those occasions the destructive and mischievous types manifested great interest in the ward decorations, assisted in putting them in place and rarely destroyed them. It is the defective individual who is constantly upsetting discipline. This latter class should not for obvious reasons be sent to a state hospital. Their presence among the purely mental class is detrimental to the latter's welfare and recovery. Many of these defective individuals are tagged and sent to a state hospital, when they should be sent to jail. It is the escape of these maliciously mischievous individuals, and their anti-social conduct which calls forth violent criticism upon the head of a humane superintendent. The term "insane" has never been properly defined. It is the cause of endless disputes in legal cases. Every author has a definition and the whole proposition finally involves whether the individual knows the difference between right and wrong. Many cases of mild mental disturbance, without organic change, are presented for classification. Recovery usually takes place by simple means, but with the present methods the Psychopathic Court has no alternative in most instances but to declare the individual insane. It is a rough word which clings,

blights the prospects, wrecks the future and prohibits the ordinary activities of a useful career. It may be interesting to know that the term "Lunatic" is still used freely in the phraseology of the commitment laws in twenty-five states. To more adequately describe the patient he is classified in some states as the "Pauper Lunatic." There is some satisfaction for the "Indigent Lunatic" that he is given preference in admission where the hospital is overcrowded.

The first statute in existence in this country for the commitment and care of the insane was passed by the Massachusetts Legislature in 1788. The act provides, "Whereas there are persons who by lunacy or otherwise are furiously mad, and so disordered as to be dangerous to go abroad, it shall be lawful for two or more justices of the peace to cause to be apprehended and kept safely locked up such persons in some secure place and if necessary to be chained there."⁷

In those early days there was cause for such a law to be enacted as a person devoid of his reason was presumed to be possessed by the devil and witches were burned at the stake, but why in these days of modern research should such laws apply? Where an individual is accused of crime and held as insane by the court some legal measure must of necessity be invoked for his detention, but there are hospitals for this special purpose and all such cases should be sent to these hospitals.

The early history of the care of the insane was purely custodial, contracts being awarded to the lowest bidder, the patients being confined in jails, houses of correction and prisons, in company with criminals. The first hospital for the care of the insane was built about 1833. Since that period the pendulum has swung to and fro, first for humanity and then a retrogression to barbarism.

When I entered the state service in 1893, restraint of all kinds, including the famous Utica Crib was used. An act was passed by the Illinois Legislature prohibiting restraint unless ordered by the physician and provided that a record must be kept of the restraint used, for the inspection of the public.

During the following four years sincere efforts were made at the Elgin State Hospital to promote humanitarian methods and credit is due Dr. Arthur Loewy, the superintendent. It was

during this period that I dreamed of a day when restraint and bars would be consigned to the scrap heap and the mentally ill, unfettered, would be granted the liberty so necessary for their recovery. The removal of bars is not a matter of experiment but a lesson learned from a study of the situation.

It is a matter of psychology. Liberty is a precious thing, and the love of freedom is a prominent part in everyone's makeup. Whether well or ill, mentally, one is not so anxious to obtain that which is forcibly forbidden him if the barrier is not constantly before him. Restraint and seclusion is being rapidly discarded and such steps, it has been proven, helped immensely in installing in the disordered mind of the individual the fact that he is not a criminal but a patient, and they produce, it has been determined, a condition whereby the person under treatment is more tractable.

In most forms of mental trouble the patient is under great apprehension and fear. This condition is enhanced by the methods used for their commitment. Every step is clothed with legal authority and finally he is housed behind bars. This conspiracy of which his diseased brain has conceived, is now a fact; he is a prisoner, and his relatives, the mother, father, wife, brother and sister are responsible. Can you wonder why the mental patient dislikes his best friends? I have often seen patients brought to the hospital tied down with ropes, and with the body covered with abrasions and contusions as a result of brutal handling. This treatment is most unnecessary and is the result of ignorance and the prevailing attitude of the masses toward the mentally afflicted.

Elimination of these barbarous means is happily being brought about by healthy and progressive co-operation by the various mental hygiene social service and state organizations in an educational propaganda. Cook County made a big stride in the cause of humanity when a car was built to convey the patients from the Psychopathic Hospital to the state institutions. This car is splendidly fitted for the comfort of the patient, the physicians and trained nurses in attendance.

The family physician is handicapped in many ways when called to adjust the treatment of a mental case and obstacles confronting him. The

easiest way out of the dilemma is to send the patient to the Psychopathic Hospital, but the relatives protest and urge home treatment. The nurse problem then presents itself. Few nurses are trained in mental nursing, and are difficult to obtain owing to the high wage demanded. Home treatment is ideal, and can be carried out successfully in acute upsets. Fear on the part of the relatives is a detracting feature in obtaining good results. As a rule the members of the household are agitated and emotional, showing more stress than the patient. All this must be corrected and replaced by an atmosphere of cheerfulness and calm, thus inspiring confidence in the patient.

In closing I wish to refer to the old four and five-story structures known as the main buildings of the state hospitals. These buildings present problems due to constant overcrowding. These structures were erected during an early period when only custodial care was considered. The wards were presumed to accommodate from thirty to forty-five patients and there were parlors and day rooms in each ward but nowadays these wards are housing from sixty to eighty patients and parlors and day rooms are used as dormitories. The beds are so close together that there is but few inches space between. As a result of this overcrowding, ward halls are filled with a jostling mass of humanity.

One and two-story cottages accommodating fifty to seventy-five patients can be erected by employes and patients, thus obviating this overcrowding. Cement blocks for outside walls, terrazzo and cement for flooring and all kinds of mill work from rough lumber are made in the institution; sand and gravel in unlimited quantities supplied from pits on the grounds. In three years during my administration five structures were erected by the patients and employes. If all of the old buildings could be torn down and cottages supplant them the patients would receive modern hospital treatment instead of custodial care.

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REFERENCES

1. Boston State Hospital Public Document, 1919.
2. Koren—"Laws Relating to the Commitment and Care of the Insane in the United States."
3. Illinois Statutes, Revised, 1917.
4. Institution Quarterly, Illinois, 1915.
5. Frankwood Williams: Transactions, American Medico-Psychological Assn., 1919.
6. H. J. Gahagan: Transactions, American Medico-Psychological Assn., 1917.
7. Kline: Transactions, American Medico-Psychological Assn., 1919.

DISCUSSION

Dr. Edward A. Foley: The law under which Illinois is now taking care of the insane is fully covered in the revised statutes. This law has been in force since 1873. Plainly, under this law we are looking to the safeguarding of the rights of the individual. In this manner the law provides that the commitment to hospitals for the insane shall be by three methods: First, jury trial; second, a commission with two physicians, and third, a voluntary commission, provided the individual is in such a state of insanity that he requires care and treatment in a hospital for the insane.

In the City of Chicago I can hardly see how we can modify the commitment laws to the hospitals for the insane, because our population is made up of 50 per cent. of the foreign born, who are not familiar with our ways of living. They live in communities by themselves, bringing with them their habits and customs from southeastern Europe, and nothing happens until some overt act is committed calling on the civil authorities to bring the person committing the act to a place of detention. Cook County has provided a place where these individuals can be taken, the psychopathic hospital. This hospital is under the supervision of psychiatrists and a corps of physicians and nurses. Observations are made into their mental state and their physical condition is examined. They are examined serologically, the facts obtained, and the case is presented to the county judge. The judge arranges so that the relatives can be present and give the facts in the case, whether he has been misbehaving, whether he has lost his reason, and after all these things are gone over the patient is brought in to state his own case. As the examination is conducted at the present time, two physicians are present who make a record of the facts of their examination, both mental and physical in the case and make recommendations to the county judge. If a patient is deprived of his reason, they make recommendations as to whether the patient should or should not be sent to one of the hospitals for the insane. This applies to the City of Chicago. In some of the counties outside of Chicago advantage is taken of the law by which a patient is brought to the hospital for the insane pending an investigation into his mental condition and whether or not he is insane. This works out very well in some hospitals in which I have observed the cases. Where there is doubt as to a patient's mental condition, the physicians in the hospital have him under observation and make a report to the county judge, who visits the institution in the ten day period, and, if necessary, commitment papers will be issued.

In Chicago, following the issuance of the legal papers by the county judge, the papers are distributed to the various institutions in this locality.

The late Judge Scully looked after these patients in a more humane way. During his term of office, patients were taken from the psychopathic hospital to the various state hospitals in automobile busses.

Prior to this time they were taken by almost any conveyance, on street cars, led through trains, and conveyed to Elgin or to Kankakee. Judge Scully used his influence with one of the street railway companies and had a special car built to bring them to the institutions, and the conditions under which they arrive now are more humanizing than in previous days.

Recently improvement has been made in bringing these patients to institutions, and that is, at the suggestion of the superintendent of the Psychopathic Hospital a physician accompanies a patient from the Psychopathic Hospital to the various state hospitals, so that all the time he is under medical care, and he is likewise accompanied by nurses, notwithstanding the fact that, from a legal point of view, they have various deputies from the sheriff's office to bring them to an institution. When admitted to the institution they go through a special routine. They are brought into the examining room; two physicians are present, two supervisors, who examine them to ascertain their condition. Upon their arrival, they are placed in bed, and while in bed are kept under observation, a complete mental and physical examination being made, including a serological examination. The results of these examinations are recorded. The cases are presented at that meeting for discussion by the various members of the staff, and different ways and methods of treatment are outlined, and it is determined whether or not the individual should be permitted to remain in the institution for an indefinite period or held for a certain length of time, or prevented from returning to his family and friends.

The patients are distributed to the different buildings according to their behavior. The most humanizing things I have noticed in this institution in the past four years is the systematic method of putting these patients to do something, such as occupational therapy. The work these patients are given to do is generally planned according to their condition, and to keep them from deteriorating mentally and physically, if possible. Occupational therapy is the most humanizing thing I have observed in the institutions, and Dr. Gahagan has completely removed all restraint. These patients are treated by hydrotherapy, they are placed in a department where they are given continuous baths, plenty of sunlight, and their condition on the whole is much better than it was in the institution ten years ago.

At the Chicago State Hospital, where thousands of patients are admitted a year, you will be surprised to know that they have taken away from the institution during the year 150 patients, not as cured, but they have returned to the condition in which they were previous to admission to the institution and in many ways are better citizens than they were previous to their experience in the Psychopathic Hospital and State Hospital for the Insane.

DR. BAYNARD HOLMES, SR.: You can probably hardly appreciate the tremendous complexity of the problem of commitment. This problem is really one of great significance, because it has a legal entrance into a

medical field, and by that very fact the medical attitude of the institutions of the insane is modified greatly from that of the medical attitude of other institutions where no legal commitment is still maintained. It seems to me, a great curse lies in this change in the attitude of those in charge of the insane towards their wards. It is not the attitude of the physician. It is the attitude of the keeper, and that permeates and grows in increasing force upon one as they observe the *esprit de corps* of the keepers of the insane. I regret exceedingly that there seems to be no solution to this problem. I am strongly in favor of some relaxation, and I have frequently known instances where great suffering was produced by the need of the legal commitment. When a patient is committed, he then goes into a class of committed persons, legally committed persons, and he is not put in any particular place where any particular care is to be given him which is different from what is given another individual. The insane should, from the very earliest time that they appear in an institution, be so arranged, so divided, and so placed that they can be, from the very first day, advanced gradually toward the best possible physical and mental condition, but when they go into an institution twenty or fifty at a time, it takes weeks before this division or classification can be made. It takes a long time before anything can be done with them to improve their mental and physical condition. The institutions themselves are almost units. There should be something like a colony for a large proportion of the insane where they can live entirely out of doors. They could take care of themselves with the least possible supervision, and they should be classified according to the occupation in which they could really be useful. They are stamped out of society, they are out of the competitive system, but they can be placed in a position where they could be occupied and engaged in useful and favorable employment. This is not, it seems to me, the great point which we look forward to in regard to the insane.

The whole problem of insanity is an unknown one except in a very narrow part of it. We know the proportion of insanity that is caused by syphilis. That is practically the only great group of the insane where the etiology is understood. The other group of the insane, where there is no understanding of its etiology, is relatively small; but investigation and research into the cause of insanity is not in existence. If the insane are removed from the ordinary care of the medical profession, they are congregated into the hands of the state officers, and the state lunacy board never asks for adequate funds for investigating the causes and possibilities of prevention and cure of the insanities. It is right here where any advance that is to come in the conduct of our institutions for the insane must begin. There must be adequate research into the cause of these conditions, and following the success of that research it will be possible to prevent other forms of insanity as it is now possible to diminish the number of cases of paresis. Syphilis and its treat-

ment is necessary to the prevention of the insanity from that cause. So it will be in regard to the other insanities.

What I would like to see is a positive interest on the part of the medical profession in the condition of the institutions of the insane, and an absolute assumption of the responsibility upon their part that adequate research and investigation shall be made of the condition of the insane, the possibilities of finding the cause, and the possibilities of prevention and cure.

DR. CLARENCE A. NEYMANN: I believe a few words might be said about the admission of patients to the Psychopathic Hospital. Before these patients are passed on to be committed to a state hospital, there is a definite law about commitment, but like all laws, this law does not really work, and it is a fact that the Psychopathic Hospital at the present time often works without the laws, and I believe justly so.

Legally, if a patient is brought to the Psychopathic Hospital, a doctor of standing has to sign a certain paper or papers, and the relatives take those papers down to the county building, and then a written report is brought to the sheriff and the sheriff delivers the patient to the hospital. But that is not actually so. Mostly, the commitments of patients to the Psychopathic Hospital are as follows: The relatives come and actually bring a patient there, and sometimes a patient may be admitted as a ruse by the relatives. However, this may happen only once or twice a year where the admission rate is approximately 6000 patients. A doctor talks to the patient and relatives and discusses the question whether he needs treatment or not, and if we have a certificate from a doctor, we will take a patient. If a patient has no certificate, we will take out one, if we think it is necessary. If it is a case that ought to be admitted, a certificate is made out which ought to have been obtained before.

A great many patients come to the Psychopathic Hospital as voluntary patients; others come through the advice of a physician or they come on account of pressure exerted by the members of their families. The admission rate at the present time at the Psychopathic Hospital is approximately 120 patients a week. We have 200 beds in the institution, and in spite of this discrepancy between the number of beds and the number admitted each week, we have to get rid of a great many of them. About 20 per cent. of the patients are discharged from the Psychopathic Hospital as recovered or improved, and 10 per cent. more, making 30 per cent. in all, are sent back to their families and are provided for in sanitariums and other institutions. In this way the patient escapes the legal aspect of the whole business, and patients in the wards have taken on the attitude that it is easy to get out of the Psychopathic Hospital; that it is a place where they are not necessarily locked in, but are treated with occupational therapy, with hydrotherapy, and with psychoanalysis. A short time ago a patient in one of the wards rushed up to me and said, "Doctor, when do you think I will be ready to go home?" I

replied, "You had better see your ward physician, but I think you will be able to go home very soon."

The research facilities in the Psychopathic Hospital are limited, because at the present time there is no adequate laboratory arrangements. But that has been partially overcome by the attitude of Dr. Hektoen, who has furnished a laboratory to the Psychopathic Hospital for the use of purely research work.

The whole problem to my mind is one of turning over a hospital for the insane into a hospital along general hospital lines, of pacifying the relatives of patients who are often obstreperous and of assuming the same attitude toward these people that one would assume if he were treating a surgical, a gynecological, or medical case. I think the great trouble in our hospitals for the insane is that there are so few doctors, generally speaking, that they can never assume that real relation of physician to patient in our state hospitals. We need more doctors in our state hospitals, and we need more doctors than we have at the present time in the Psychopathic Hospital. With 200 beds, and only nine physicians, it is necessary to get more people interested in this work and to establish a closer medical relation between the patients and the doctors themselves.

The whole problem of research is to my mind intimately connected with the general connection of the research physician to psychopathic work and the treatment of research in this direction should be along exactly the same lines as in general medicine, or surgery or any other field.

DR. GEORGE W. HALL: I wish to make a remark in addition to what Dr. Neymann has said, who is the chief resident physician at the Psychopathic Hospital. In my opinion great progress has been made during the past few years in the handling of the insane at the Psychopathic Hospital. At the present time, we have not only Dr. Neymann's ability and his associates, but we have one of the best superintendents of nurses I think the Psychopathic Hospital has ever had. In addition to that, every Tuesday evening there is a meeting of the attending staff with the local resident staff, at which so-called doubtful and borderline cases are taken up and discussed, as far as possible, during that evening. I think this has been of great benefit not only to the patients but to the resident physicians as well as attending physicians. I wish to call attention to the fact that these meetings are open to physicians of the city and county, and we feel it would be of great benefit to them and it would help to educate all of us if we had a larger attendance at these meetings. We have cases a great many times that are not insane, and such cases together with those that are insane, make the meetings more interesting for that reason.

DR. GAHAGAN (closing the discussion): I am very much pleased at the interesting and free discussion which my paper has aroused. I mentioned in my paper the fact that patients are being handled in a more humane manner; that they are receiving more humane

care, and the proceedings of the psychopathic court are ideal in Cook County.

The object of my paper relative to commitment is to avoid the usual preliminaries for the admission of the patient. For instance, in many places it is necessary to detain the patient in a jail for several days awaiting the pleasure of the county judge. If you will read Koren, "Laws Relating to the Commitment and Care of the Insane in the United States", it will shock you to know how crude and cruel are these laws applying to the mentally ill, in many states. I realize that through the kindness of Dr. Neymann a patient may be admitted to the Cook County Psychopathic Hospital pending the receipt of the usual legal forms. Why not have laws amended fitting in with the Massachusetts Temporary Care Act? Seventy-seven and six-tenths per cent. of the patients admitted to the Boston Psychopathic Hospital were temporary care cases, and of these 75 per cent. were discharged to the community without need of further care. The brilliant work of the late Dr. Southard was made possible through provisions of these laws.

Modification of the laws preventing the mentally ill being placed in jail and permitting their admission to the hospital pending receipt of legal forms, should be requested of the legislature.

THE SAUNDERS AND ROSENOW THEORIES OF ACUTE POLIOMYELITIS*

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To the practitioner one of the most interesting problems that still remains to be solved is the etiology of poliomyelitis anterior. Why should this disease occur sporadically all over the United States every year, sometimes increasing, sometimes decreasing in the number of cases, occurring mostly in the rural communities or in the suburbs of large cities? Why should this disease occur in the summer only with a few exceptions, and what immunizes the adult, so that most of the cases are in children? To these questions no positive answer can be given. When the disease suddenly takes an epidemic form, as it did in the eastern states a few years ago, the medical profession and the public naturally take a greater interest in the subject. But the disease every summer produces its hundreds of victims all over the country.

The workers of the Rockefeller Institute, after most careful experimentation and study, decided that the disease was transmitted by human

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carriers, that the virus is found in the nasal and faucial secretions and the disease is conveyed by contact. This theory, while well supported by some experimental facts, does not satisfy the deduction made by practitioners from clinical cases. The virus, whatever it be, must be very widely scattered and only reveal itself by an occasional endemic outburst.

There are two theories based on experimental and clinical evidence, which have been put forward since Flexner attempted to explain the disease. The first of these is the fly theory, especially championed by Dr. E. W. Saunders of St. Louis. Dr. Saunders' work was never completely published, but his work was very extensive, and embraces a very large number of experiments running over several months. He accuses the green fly of being the intermediate host in the transmission of poliomyelitis. He shows conclusively that the larvae of the green fly grown in certain dead animals at certain times, convey a very powerful poison, which produces limberneck in chickens, paralysis in pigs, dogs and monkeys, and the disease has a remarkable resemblance to human poliomyelitis.

To any one who has followed his experiments, as I had the opportunity of doing, there can be no doubt but that he was dealing with a positive and powerful virus. The poison extracted from these larvae and injected intraspinally into the monkey, produced typical symptoms of poliomyelitis as in man. The incubation was 7 to 9 days, and at least in two instances the disease was transmitted from the spinal fluid of one monkey to another. Microscopic lesions obtained post mortem from these monkeys could not be differentiated from the lesion known to occur in the human being from this disease. A summary of the principal part of his work was printed in the *Missouri State Med. Journal*, 1914, p. 205.

Dr. Saunders assumes that the virus of poliomyelitis, like rabies and tetanus, has a habitat outside of human beings and is conveyed, or better still, is developed to full potency in the green fly and its larvae, and the disease may be transmitted by the ingestion of the larvae or ova of the green fly, or the bite of the green fly. Dr. Saunders did not, however, prove that the virus was the same as that producing poliomyelitis in children. There are several serious objections against the theory that these poisons are the

same. The extreme susceptibility of guinea pigs, rabbits and chickens does not support facts known about the human disease. His experiments showed that there are two distinct parts of his virus, one of which causes toxic symptoms within a few hours, while the second required from 7 to 9 days to develop. He explains this by assuming that a powerful toxalbumose was associated with a living pathogenic microorganism.

Medical science knows of another virus, which also produces nerve lesions and death, and which Dr. Saunders' experiments have not excluded, namely, the botulismus poison produced in a variety of foods by the bacillus botulinus. Recent studies and experiments at the University of Illinois have shown that the so-called food poisoning in animals is probably due to this virus. The general symptoms produced by Dr. Saunders' virus on guinea pigs, rabbits and chickens entirely resembles the effects produced by the injection of the botulismus poison. The opinion now received in scientific circles is that the limberneck in chickens and sporadic paralysis in the lower animals may be due to the botulismus poison growing in a variety of spoiled foods. It is possible that this poison forms in certain dead animals undergoing putrefaction, and that the larvae of flies may absorb it and convey it. Experimental evidence is still lacking.

There are, however, a few facts connected with Dr. Saunders' experiments which cannot be explained on the ground of pure botulismus poison: namely, the long stage of incubation in some of his animals and the transmission of the poison from one monkey to another by means of its spinal fluid. This theory then, has in it many gaps, and until they are closed by more experimental work, we cannot accept this theory as a working basis.

Another theory is that proposed by Rosenow, who, *Minnesota Medical*, 2, 253, 1919—has made extensive experiments on the etiologic relationship of a pleomorphic streptococcus, which he found constantly present in the diseased tissues and from which it may be cultivated months after glycerelation. It has a special localization power in the nervous system and produces lesions and flaccid paralysis in young rabbits and guinea pigs. The organism is filterable. The same organism may be made to infect monkeys in which the characteristic symp-

toms and lesions are produced. Antibodies are produced in monkeys which make them immune. Horses injected with the aerobic form of human virus produces a large amount of specific antibodies in the serum, which protects monkeys from intracerebral inoculations of the virus and has a curative effect in the treatment of human poliomyelitis.

There are many clinical facts which are difficult to reconcile with Rosenow's theories. If it is a streptococcus and conveyed by secretions of the mouth, why does the disease occur in the summer only? All respiratory infections of whatever kind occur mostly in the winter. Another difficulty is that the disease produces a permanent immunity and we do not know of any streptococcus infection that produces a permanent immunity. Again he claims that his horse serum contains many antibodies, which is also quite different from what is produced by the injection of streptococci in horses. Flexner and his workers have made several experiments, which seem to indicate that the streptococcus of Rosenow is merely a secondary invader coming from the nose and throat, and not the original cause of the disease.

The Rosenow's streptococcus then would be to poliomyelitis what the streptococcus is in scarlet fever, small pox and influenza; merely a secondary infection in tissues weakened by the paralysis poison, and whose presence would vary somewhat in different epidemics. The clinical results of Rosenow's serum too, do not as yet justify the theory that his streptococcus is the primary cause of the disease. He reports a mortality of about 10 per cent. in cases in which the serum was used. This corresponds very closely with the average mortality of clinically recognized cases. Thus in the last 5 years I have seen about 63 cases of poliomyelitis in their acute stage, in which a positive diagnosis was made either by spinal puncture or by the subsequent history of the case. Five of this number died, giving a mortality of less than 10 per cent. Only five of these were treated by the Rosenow serum. If we add to this number a large group of cases presenting nervous faucial and gastroenteric symptoms, undoubtedly due to the virus of infantile paralysis and show no paralytic symptoms, the mortality becomes still less.

I do not wish to leave the impression that the

Rosenow serum has no value in the disease, even if the green streptococcus is only a secondary invader. A serum which overcomes its toxicity should be of considerable service. My own experience in the use of this serum is very limited. I believe that Rosenow's careful work should receive merited attention, and the serum that has been produced under his direction should be given an extended trial.

It is questionable, however, except for scientific purpose, that we should advise lumbar puncture in all suspected cases. I have gotten the clinical impression that lumbar puncture in some children produces a certain amount of shock and this lowers the resistance to the infectious organism. Lumbar puncture then should only be resorted to where the clinical diagnosis can not be made with a fair degree of certainty. Its use is indicated where there is possible doubt as to the diagnosis and when the possibility of cerebro-spinal fever can not be excluded.

The Rosenow serum should be given intravenously or intramuscularly in all cases where a careful clinical examination shows the probable presence of infantile paralysis. It is necessary here to again call attention to the fact that many of the cases of sporadic infantile paralysis may really not be this disease, but due to the botulismus poison, and the possibility of this poison should always be carefully considered in isolated cases of the paralysis. The Rosenow serum would then, of course, be of no service, but its administration would probably do no harm.

536 N. Taylor Ave.

THE OUTLOOK FOR THE FOURTH ERA SURGERY*

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The first era of surgery was heroic. Both the patient and the surgeon required a high degree of bravery and the technique was based upon empirical formulae. Next came the second or anatomic era of surgery when the great anatomists entered the field and allowed surgeons to know accurately about the structures with which they had to deal. So great was the progress made in

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the second era that one of the great teachers of the time said that surgery had reached its limitations. Nothing more remained for the student of surgery in the future excepting to acquire the knowledge of what was already known and to perfect his manual technique. The most remarkable advance during the days of the anatomic era consisted in the introduction of anesthesia, something quite separate and apart from the anatomic features of the subject.

Then came Pasteur and Lister who introduced the third or pathologic era of surgery with our knowledge of infections. A complete revolution in the whole field of surgery followed and the third era was the one in which the greatest progress in all history up to that time had occurred. According to the principles of the third era the surgeon was to destroy bacteria and their products by means of his own resources. The physiologic resources of the patient himself were overlooked, or at least were not given important position. The surgeon in his conscientious efforts to destroy bacteria and to remove their products introduced two destructive features. The first of these destructive features included the employment of germicides which injured the defense mechanism of normal tissues at the same time when they were destroying bacteria. Surgeons soon became aware of the importance of this first destructive phase of the third era and corrected it by disposing of germicides which caused injury to normal tissue cells. The second destructive phase, that of prolonged operations and with unnecessarily large incisions which led to destructive impulses being sent into the centers of consciousness of the patient, is not as yet fully appreciated. Furthermore, the fact that many bacteria fall into the wound while the surgeon is at work has a very distinct meaning. It means that in the course of prolonged operative work and with large incisions very many bacteria fall into the wound from the air and upon structures which are more or less damaged, with consequent loss of resistance in the course of operative work. Experiments made with culture media in Petri plates exposed in the operating room under the best of aseptic precautions showed that culture media become infected after fifteen

minutes of exposure and sometimes after only a few minutes exposure.

We are now at the beginning of the fourth or physiologic era in surgery. Wright and Metchnikoff with their studies of opsonins and of the protective forces of the individual gave us a basis upon which we may formulate the principles of the physiologic era. In this era we are to give the patient Home Rule, in other words, we are to avoid as far as possible long exposure of the wound to the air, we are to make as small incisions as will suffice for conducting our operative work and we are to avoid the handling of structures as far as possible in order to avert the destructive impulses sent to the centers of consciousness of the patient even when he is thoroughly anesthetized as has been shown by Crile. One of the features of the third era of surgery has stood in the way of rapid acceptance of the principles of the fourth era. When the rubber glove was introduced it gave us a distinct advantage in avoidance of carrying bacteria into the wound by the hands. On the other side of the question there was a loss of the tactile sense on the part of the surgeon which has led him to make larger incisions and to work largely by sight. In the fourth or physiologic era we are to take into consideration this feature of the question and we must get back to the *tactus eruditus* of the older surgeons who, like Tait and Price, had remarkably good results. Such good results in fact that these men were slow to accept teachings relating to the germ theory of infection. The protective resources of the individual are truly remarkable when these resources are demonstrated after avoidance of shocking methods of surgical technique.

When surgeons in general come into full appreciation of the importance of the protective resources of the individual we shall then emerge into an acceptance of the principles of the fourth or physiologic era of surgery which will make almost as great a revolution as that which occurred with the introduction of the third era. We cannot as yet know what the fifth and sixth eras of surgery will mean, but doubtless they are forthcoming.

616 Madison Avenue.

SURGICAL TREATMENT OF INTRACRANIAL INFECTIONS*

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In order to discuss this subject at all adequately in the brief time at my disposal, I am obliged to confine my remarks almost entirely to those types of intracranial infections that may be relieved by surgical measures.

All intercranial infections may very properly be grouped under two headings, general and focal. I shall first consider the general types. These are all various types of meningitis. Those whose etiology is as yet not known, namely, poliomyelitis and encephalitis lethargica cannot be benefited or influenced by any surgical procedure. Occasionally, however, the surgeon will be called to see a case that presents symptoms that suggest increased intracranial pressure. There may only be what looks like an early choked disc, somnolence, or paralyzes of various types. The surgeon may then be obliged to decide whether the condition is surgical and whether a decompression or some other surgical procedure is indicated. I am assuming that we all want to belong to that ever increasing group of surgeons who feel the necessity of making their own diagnoses and are not content to be merely the hands of the internist. I have seen a number of cases of encephalitis lethargica in whom for several days there were symptoms suggesting neoplasm or abscess.

The history of the onset of the illness, the absence in some cases of any focal symptoms whatever or in other cases the peculiar distribution of cranial nerve palsies, which could not be produced by a focal lesion establishes that the condition is produced by a diffuse process and hence is not amenable to surgery.

The epidemic form of cerebro-spinal meningitis due to the meningococcus is also not to be treated surgically but is handled far more effectively by injections of Flexner serum. When the condition, however, becomes chronic, adhesions may form about the cisterna magna or the roof of the fourth ventricle and produce an internal hydrocephalus of the obstructive type. These cases then require surgical intervention to relieve

the hydrocephalus. This is the most favorable type of hydrocephalus to treat, for by breaking up the adhesions the original pathway for the cerebro-spinal fluid may be re-established. My own custom has been to carry out this procedure through a median line incision over the cerebellum and leaving the dura open so that the cerebro-spinal fluid may be absorbed in the subcutaneous tissue. There are a few cases that have localized meningococcus infection in one or both ventricles and these are greatly benefited by an intraventricular injection of Flexner serum.

In regard to the other forms of acute meningitis due to pyogenic organisms there has been some difference of opinion. Some men have attempted to drain such infected meninges and some have attempted to irrigate them. As I see it the problem is quite similar to that we have in peritonitis with this difference that the meninges have not the marvelous recuperative power that the peritoneum has. Those who attempt to drain or irrigate the meninges are doing what surgeons did 15-20 years ago to the peritoneum. The only hope I see is to open and drain the original focus from which a meningitis starts and trust that the meninges will take care of the infection. Just as no case of peritonitis in which the entire peritoneum is infected ever gets well, so no case in which the meninges are completely involved recovers, but the cases of beginning meningitis associated with, for example, mastoid abscess, recover when the local focus is opened and drained. In every case of septic meningitis the proper procedure seems to me to discover if possible the original focus and drain that but leave the infected meninges alone.

Prophylaxis in cases of traumatic origin is of greatest importance to prevent both meningitis and brain abscess but this phase will be taken up somewhat later under the heading of brain abscess.

We must consider next the two chronic types of infection, tuberculosis and syphilis. Both of these may produce general or focal lesions. Tuberculous meningitis cannot be influenced, as far as I have ever been able to discover, by any surgical measures. The isolated instances of recovery that have been reported in the literature have done so without surgical intervention. Undoubtedly increase in intracranial pressure is a contributory factor in the ultimate death of these

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cases but I have never been able to convince myself that either withdrawal of cerebro-spinal fluid or a decompression operation affects the outcome.

Focal tuberculous lesions have a much more favorable outlook. The diagnosis of the pathology of the lesion can rarely be made beforehand for the symptoms of a focal tuberculous process are almost identical with those of any intracranial neoplasm with the sole difference that the process may have been of long standing and may have progressed more slowly than does a neoplasm. Whenever a patient presents symptoms of an intracranial growth of long standing a tuberculoma should be thought of and if in addition the spinal fluid shows an increase in lymphocytes and a negative Wassermann the probability becomes almost a certainty. Such a process should be operated upon as any brain tumor would be. Such tuberculomas have a thick inflammatory membrane and it should be the aim of the surgeon to remain outside of this membrane in his removal of the process as otherwise there is a grave danger of starting up a tuberculous meningitis; in fact, this has been the ultimate result in many cases.

Cerebro-spinal syphilis is rarely a surgical disease but a small group of these cases call for prompt surgical intervention. I refer to the cases of cerebral or cerebro-spinal syphilis with rapid loss of vision due to choked disc. These cases all too frequently go on to blindness because too much time is spent giving them anti-syphilitic treatment. These cases have a choked disc and should be decompressed as soon as the choked disc is recognized and then should have anti-syphilitic treatment. I know of no more gratifying cases than these syphilitics with choked disc.

A focal syphilitic lesion, contrary to the general belief, is very rare; when it does occur if there are marked signs of increased pressure it should be operated upon if it does not yield promptly to anti-syphilitic measures. If a choked disc is present operative intervention should precede the anti-syphilitic measures so that vision may be preserved. Both in the more generalized and focal syphilitic lesions with choked disc it is dangerous to give salvarsan on account of the danger to vision.

There is a group of intracranial infections that

need special consideration—thrombosis of the sinuses.

The sinus most frequently involved is the lateral sinus in the course of a mastoid infection. The sudden development of a septic temperature with temperatures ranging from 105 and more to 97 in the course of a mastoid infection together with prostration, leucocytosis, and a positive blood culture makes the diagnosis clear. The indication is to ligate the jugular vein below the thrombus and then to lay open the sinus and remove the entire septic clot, opening the sinus as far back as necessary and drain the entire area.

A rarer but much graver form of thrombosis occurs in the cavernous sinus. Often following slight nasal infection or infection of the face or forehead, there develops a bilateral exophthalmos. Attempts have been made to treat such a thrombosed sinus like a thrombosed lateral sinus but never with a successful outcome. It is impossible to clean out the entire thrombus in such a sinus and since a complete operation is not possible I believe that these cases should not be operated upon. I know of but one undoubted case that ever recovered without operation.

We come now to another group of focal intracranial infections—the brain abscesses.

A brain abscess may develop after a compound fracture of the skull in which the dura has been opened or by direct extension from an infection in the scalp or bone or the infection may be carried through the blood stream, in which case there may be a single, but more often, multiple abscesses.

I have been interested in trying to throw some light on the development of brain abscesses by some experimental work. Two of my students have worked on the subject but never arrived at any very fundamental conclusions. At least two points, however, seemed to be quite clear from their studies. First, that whereas the meninges are very susceptible to infection brain tissue is not; second, that the mere introduction of bacteria into brain tissue is not enough to produce a brain abscess. Some other factor or factors are necessary. One of these undoubtedly is a disturbed circulation, that is, a thrombosis of some vessels is a frequent, possibly invariable factor, in the formation of a brain abscess.

In the traumatic cases prophylaxis is the great surgical measure to prevent the formation of an

abscess or meningitis. The experiences in the war have revolutionized our treatment and ideas on this subject. Every compound fracture of the skull with open dura should be debrided. Whereas in war wounds the tract of the missile can be cleaned out with suction and a catheter, in the wounds of civil life they are shallow, and I have found that more satisfactory results are obtained by excision of the traumatized area with a sharp knife and carrying the incision back into normal brain tissue, and if dura has to be excised replacing it with a fascial transplant and sewing up the wound tightly. If this has not been done and an abscess has developed it must be opened and drained just as any abscess elsewhere in the body. There are several points that must be kept in mind when this is done: First, when a brain abscess is opened the brain tends to fall back from the meninges and there is grave danger of a meningitis developing; secondly, both infected and normal brain tissue is so soft that the ordinary methods of establishing drainage by means of tubes of various sorts may cause a pressure necrosis and aggravate the condition; furthermore, brain tissue becomes edematous so readily that a drainage tract may easily become obliterated. MacEwen in his classical work on Pyogenic Diseases of the Brain, recognized these difficulties and tried to overcome them by using decalcified bone tubes which he left in an abscess cavity until the healing brain extruded them. I have found the best drainage material to be strips of gutta percha tissue. Their weight does not produce pressure necrosis as do rubber or coiled wire tubes, and by using a number of strips one can be removed and replaced without losing the drainage tract so that there is no chance of making a false passage.

No discussion of the surgical treatment of brain abscesses, however, would be complete without a few words on the subject of the diagnosis of this condition. I refer to those brain abscesses which are not preceded by a trauma, for in a traumatic case, of course, one would always be on the lookout for such a possibility and any evidence of increased intracranial pressure would put one on one's guard.

It is a very trite remark to say that there is no more difficult neurological diagnosis to make than that of brain abscess but the more of these cases one sees the more is that brought home to

one. Patients may go along for months, even years, attending to their work without presenting very tangible symptoms. It has been a time honored custom to classify abscess cases into three groups. The acute, the latent, and the terminal stages. These stages in my experience are not by any means clearly demarcated. It might be well to emphasize those symptoms and signs of abscess elsewhere in the body which are conspicuous by their absence in a case of brain abscess. Fever is, as a rule, absent, also a leucocytosis and a rapid pulse. In other words, the symptoms that almost invariably accompany pyogenic abscesses elsewhere in the body are not observed in brain abscess. The one most striking and outstanding symptom is a slow pulse and somnolence. All the other symptoms these cases may present are the same that we see in any focal intracranial lesion. There may be choked disc and headache and focal symptoms depending upon the region that is affected, but frequently for a considerable period, sometimes years, the patients present no symptoms that even arouse the suspicion of an intracranial lesion except, perhaps, headaches. This long latency is due to the fact that after an abscess forms the organisms die and there remains a sterile abscess which grows very slowly and because of its slow growth produces no pressure symptoms, and then, for some unknown reason, suddenly general pressure symptoms develop, general convulsions or focal symptoms such as convulsions preceded by a definite aura.

In these brief remarks on the surgical treatment of intracranial infections I have endeavored to make the following points:

1. Irrigation of the subarachnoid space for meningitis is of no avail.

2. In all compound fractures of the skull, prophylaxis in the form of a prompt and complete debridement is the way to prevent meningitis or brain abscess.

3. Focal tuberculous lesions—solitary tubercles—should be dealt with as any brain neoplasm, by excision.

4. Focal syphilitic lesions, if they do not yield promptly to anti-syphilitic measures, should be operated upon as they endanger vision as much as any true neoplasm.

5. Choked disc if due to a diffuse syphilitic process should be operated upon.

6. Lateral sinus thromboses should be operated upon. Cavernous sinus thromboses had better be left alone.

7. All brain abscesses must be drained.

INDUSTRIAL OPHTHALMOLOGY*

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"Industrial Ophthalmology" is an extensive subject upon which volumes should be written if the field were to be well covered. I want only to discuss a few of the everyday needs, if I may so term it, of ophthalmology in its relation to industrial institutions and particularly railroads.

There is a definite and very important relationship between the industrial physician and the company by whom he is employed which, I am inclined to believe, is not so clearly recognized in many instances as it should be. I refer to the important part played by the industrial physician in keeping up to the highest possible standard the efficiency of the industry whose employes he is caring for. I would illustrate my contention in this manner: In the shops of any industry into which we may go we will find skilled mechanics whose duty it is to see that the machines and other equipment are kept in perfect running condition. We will find foremen who supervise the combined working of men and machines. We will find superintendents to direct the larger and more general matters of the institution. And just as it is necessary that skilled mechanics keep the machines of an industry in good running order, it is important in the same way that the man power of that institution be kept in the very best working condition by its physician.

We all realize that a workman laboring under any physical impairment, be it due to accidental injury or existing disease, is not so productive for his employer; his own earning power is decreased, and, like a worn gear in a machine, he tends to slow up the whole process in which he is a unit.

These thoughts are directly applicable to industrial ophthalmology, because, while we instantly realize the importance of proper care and treatment of an injured eye, do we all realize the equal importance of measures to prevent such

accidents? But, you may say, the prevention of accidents comes within the province of the safety engineer. Quite true, but oftentimes the safety engineer needs the aid and co-operation of the industrial physician, and in many instances the physician must himself assume the duties of a safety engineer. He is the only one, for instance, who may recognize the presence of an infectious eye disease, such as trachoma, among the workmen. Or he may discover an unusual number of similar accidents coming from a certain department and through his investigation may disclose the cause, and corrective measures may be taken that will in a large measure prevent such further accidents.

The scope of industrial ophthalmology is not confined to the healing of wounded eyes, but embraces in its every detail that almost limitless expanse known as "The Conservation of Vision." We have definite obligations in this matter. From a humanitarian standpoint we are obligated to the employe and his family. From an economical standpoint we are obligated not alone to the employer but here again to the employe and, for reasons too obvious to mention, to ourselves and to every taxpayer in the community.

Let us, therefore, briefly consider a few of the most important factors in the prevention of eye accidents: Quite naturally our thoughts first turn to the matter of light. It is very evident that a workman can not do as good or as fast work under poor illumination as he can under proper illumination and therein lies an economical factor important to the employer. Two things most to be avoided in lighting are so-called "glare" and deep shadows. The first is overcome by proper diffusion of light, and the second by proper distribution of light, and applies to both daylight and artificial light. Statistics show that there are a greater number of serious eye accidents during midwinter than during the summer and this is attributed, in part at least, to the fewer hours of sunshine during the short winter day.

There are many details of the question of "shop lighting" which we can not consider here. Perhaps in order to attain our ideal, many shops would have to be entirely rebuilt and this would, in most instances, not be possible or feasible, but no doubt there are improvements of a comparatively simple and inexpensive nature possible in

*Read before Congress of American Railway Surgeons.

most shops; for instance, there are shops whose windows are seldom if ever washed and their function is entirely lost. Ceilings and walls are unpainted or painted dark so as not to show dirt so plainly, whereas they could be well utilized by being painted or otherwise colored in light tints. Where artificial light is used at a bench the light should be so placed that it shine upon the work being done and not upon the face and eyes of the workman. Furthermore the reflection of light from the work should not be thrown back directly into the workman's eyes, but rather to one side or directly away from him.

I consider the most important single factor in the prevention of eye accidents, the wearing of protective goggles, and am sorry to say the importance of their use seems to be a matter which the average workman will not recognize. Seemingly, rather than submit to the slight inconvenience of goggles, the more unskilled workmen would rather "take a chance," so to speak, and assume the hazard of the untold agony of blindness. But we are not totally discouraged, for year by year we can see an increase in the use of goggles being brought about chiefly by the constant and untiring efforts of the industrial ophthalmologist and the employer.

The type to be worn varies somewhat according to the hazard. Protection from the foreign body emanating from the emery wheel (which, by the way, is the most prolific source of minor eye injuries) can be afforded by plain goggles of the spectacle type without side screens. Chip-pers, punch press and lathe operators, moulders, riveters, etc., and those who are working near these operators should use goggles with a fine meshed wire gauze side protection.

Welders and furnace workers should wear goggles suitably colored to protect from injurious heat and light rays and in some types of welding and furnace working helmets with suitably colored lenses should be used instead of goggles. A type of hood or helmet with clear lenses should also be worn by men doing such work as sand blasting.

Statistics show us that largely because both employers and workmen take chances there are nearly 200,000 eye accidents in United States industries every year. These figures are given by the National Committee for the Prevention of Blindness.

Suppose that each eye accident averaged to incapacitate the workman only two days (and my personal experience tells me the average is much greater than two days), the primary economical loss in United States industries each year would equal the work of nearly 1,200 men for the whole year. This, as I said, would represent only the primary loss. Onto this we must add the incalculable loss of the many who are totally disabled from blindness and the still greater number whose resulting impaired vision disqualifies them as skilled workmen and who must henceforth do only rough labor and whose places must wait to be filled until others can be trained to fill them.

Since eye accidents do occur, however, in spite of all efforts to prevent them, we must turn our attention to a few of the most common types of eye accident. As I mentioned a moment ago, the most prolific source of eye injury in industrial occupations is the emery wheel. Fortunately these injuries are usually of a minor nature and if given early and proper attention usually heal in a short time with little or no subsequent impairment of vision. On the other hand this type of injury may prove a very serious one and is occasionally the cause of the loss of the injured eye. For this reason every one of these cases must be given careful attention. In many instances this is not an easy matter because workmen are inclined to regard this type of injury as trivial and oftentimes neglect to follow the physician's instructions. When a particle from an emery wheel strikes the eye that particle is red hot and it burns itself into the tissues. The removal of the main part of this foreign body from the cornea is a comparatively simple and easy matter, if the eye is well cocained and a sharp spud or von Graefe knife used. At this stage the inexperienced operator is inclined to consider his duties accomplished and to dismiss his patient, who is likely to return in a day or two with a painful and inflamed eye and perhaps with an infected ulcer of the cornea at the site of the injury.

When the principal mass of the emery is removed from the cornea, if the operator will examine the site of injury carefully with a strong light, preferably concentrated by a condensing lens (and if necessary by the aid of a magnifying glass as well), there will be found a circular ring of ash deposited in the tissues and some-

times the whole bed where the body was removed is covered by this ash. This is often removed with considerable difficulty and only by gentle but persistent effort is the wound thoroughly cleaned of all these very minute remnants. Not to remove these remnants is, however, about on a par with leaving a gauze sponge in an abdomen. They tend to keep the wound from healing and an ulcer usually occurs which is frequently infected, and the best result that can be expected after such an ulcer is finally healed is a more or less dense opacity of the cornea which, if in or near the center, is sure to produce a certain amount of impaired vision, and often a very marked impairment of vision. The result may be even worse than this. The infected ulcer may extend deeply into the cornea allowing the infection to enter the anterior chamber, producing a hypopyon, possibly followed by general infection and requiring removal of the eye. Even after the most thorough and careful removal of such foreign bodies ulceration will sometimes occur, and I believe it is good practice, after the complete removal of the foreign body, to cauterize the remaining wound with just a touch of carbolic or iodine. This should be carefully done, using a very little cotton tightly wound onto a small, pointed applicator, care being taken that no excess of the solution is used allowing it to run over the intact surface beyond the wound itself.

Cauterization usually causes some pain in the eye for a few hours and the patient should be told to expect this. Following the cauterization an antiseptic ointment should be applied within the lower conjunctival cul-de-sac and the eyelids allowed to close. The ointment remains on the surface of the eyeball for a considerable time and is another good prophylactic against ulceration. I believe the most commonly used for this purpose is known as White's, a 1-3000 bichloride ointment, specially prepared for ophthalmic uses and preferably dispensed in collapsible tubes, making its application convenient and guarding against contamination. Following the ointment a gauze pad or patch should be used to cover the eye, being held in place by zinc oxide plaster strips. In all such cases where the removal of a foreign body has necessitated any laceration of the cornea the patient should be directed to return on the following day. If the laceration was

slight and the wound is found on the following day to be fairly well healed, little or no inflammatory reaction being present, and the eye feeling comfortable, the patient may, I think, be safely dismissed, but if the wound is not healed the treatment is continued. If much inflammation or discomfort is present the application of heat over the eye will be of benefit. If the pupil is unduly contracted, if there is any pericorneal injection or other symptoms of iritis or keratitis, atropin should be used, bearing in mind, of course, the usual contraindications to its use. I will mention, however, that we are obliged partially to disregard in many instances the matter of age as a contraindication to the use of atropin in these cases. But where its use is required in older persons caution should be exercised.

Corneal ulcers usually require at least several days of treatment. Where there is a pneumococcus infection present the use of ethylhydrocuprein is almost specific. Mercurochrome "220" in 1 per cent sol. is being advocated by some ophthalmologists in the treatment of infected ulcers. My personal experience with this remedy has been too limited at this time to warrant an opinion. Ethylmorphin hydrochlorid (Dionin) is of value in intractable cases by its effect of stimulating the reaction of inflammation.

Another cause of corneal ulcers is the workman who has gained the reputation of being "handy at taking things out of the eye." He uses any sort of dirty tool that his fancy dictates, usually a contaminated toothpick or his pocket knife, or—what is still more reprehensible—his own filthy handkerchief. No doubt this man's intentions are the very best, but "a little knowledge is a dangerous thing," and his patient is usually turned over to the doctor with a bad infection and the doctor's troubles now begin.

I do not consider it advisable for a patient to continue his work while he is seeing with but one eye, because a person accustomed to binocular vision cannot judge distances accurately and he is thereby subjected to an increased liability to accident. This is especially true of men working at machines where their hands might be caught in the machinery, but it holds good for all types of work, for even walking about is rendered somewhat more difficult for these patients.

There is another type of injury which occurs quite frequently that I want to consider briefly

because it is attended by a pitfall for the unwary physician and is capable of causing him no little embarrassment to say the least, and perhaps something more serious. I refer to the penetrating wound wherein a particle of metal enters the eyeball and remains there or perhaps penetrates entirely through the posterior wall of the eye also and lodges in the orbital tissues. This is one of the most serious types of injury and with the most fortunate outcome almost always results in a great impairment of vision, frequently a total loss of vision, and not infrequently an infection is produced by the foreign body which requires removal of the eye. A flying particle of steel or other metal from any source may penetrate the eyeball. The most frequent sources of this type of injury, however, are the punch press, and operations wherein the hammer and chisel are used. Those actually engaged in the use of these dangerous implements are not the only ones subject to injury; the little chip or splinter of steel may fly with the velocity of a bullet and pierce the eye of a workman or passerby. When this accident results from the use of the hammer and chisel the particle entering the eye may be from the metal being worked upon or it may be a splinter from the hammer or from the chisel. A hammer or chisel that is new or kept in good condition seldom causes such an accident, but when such tools become battered or "mushroomed," they are very dangerous sources of injury, because it is from the splintered edge of such a tool that the particle comes. These splinters of steel vary in size and shape, some quite large and some very small.

A large piece of metal striking the eye will naturally produce an extensive wound, the seriousness of which is instantly recognized by everyone. However, the splinter may be very small and the resulting wound recognized only upon most careful examination; even then its character may leave an experienced oculist in doubt as to whether it really is a penetrating wound. This is especially true if the wound is in the sclera rather than in the cornea. The particle has penetrated the sclera so quickly that practically no pain was noticed. The victim was conscious of something striking his eye. He probably stopped to blink a few times, probably he rubbed his eye a little, found that it did not hurt, maybe he had some one look at it and they did not see

anything. Maybe the foreman learned of the accident and sent him at once to the oculist; possibly nothing was done until a few days later when the victim discovered vision was not so good as usual or his wife noticed his eye was becoming a little red and inflamed. Such are the cases wherein lies the pitfall, as I chose to call it a moment ago—and the answer is this: In all doubtful cases, if even only the history indicates that possibly a foreign body may have penetrated the eye, have an x-ray plate made. When the penetration has occurred through the cornea instead of the sclera its recognition is usually not so difficult. If the case is seen early the anterior chamber will probably be obliterated by the escape of the aqueous humor through the wound and the iris will be seen pressed forward against the cornea with possibly a little blood in front of the iris; or if time enough has elapsed since the injury to allow the cornea to heal and the anterior chamber to reform, a wound in the iris may be seen or a cataract may be visible if the foreign body passed through the lens. But these signs may not be visible; and, on the other hand, they may be present in conditions other than foreign body within the eye. So here again we must not fail to remember the importance of the x-ray.

If the presence of a piece of metal within the eyeball is disclosed by the x-ray, its position can be very accurately determined by the localization instruments. If such an instrument is not available a fairly good idea may be obtained by two plates taken at right angles to each other, viz., one side view and one front view.

The operation for the removal of the foreign body within the eye usually consists of the use of a powerful electromagnet. The operation is not always successful, however; sometimes the body is not recovered. The very small particles are especially difficult to recover, for the simple reason that the magnet has a correspondingly small area upon which to exert its influence. I will not go into the technic of this operation because those who are not practicing ophthalmology will not be interested and any ophthalmologist present would be bored. My purpose in discussing penetrating wounds of the eye was to endeavor to emphasize the extreme importance of proper diagnosis of these cases and the great value of radiography for this purpose, as there are many cases which are

diagnosed only by this means. I want to add also as that *early* diagnosis is of *great* importance. Experience has demonstrated to us that the chances of recovery of an eye from which a particle is removed by the magnet is better the earlier that steel is removed. The longer the steel remains in the eye more permanent damage is done and the removal becomes more difficult also as time passes.

I want to mention now, in closing, just one more phase of our work: It is embraced in the psychology of industrial surgery, and I will mention it as our attitude toward our patients. This has a great bearing upon our success as surgeons and physicians and upon our own happiness and the happiness of our industrial patients. After all is said and done life holds no greater reward than friends. I believe we should assume an attitude toward each employe who comes to us for our professional aid which will cause him to feel that we really have his welfare at heart. Our attitude, which costs us nothing more than a little effort at times, often has a far-reaching influence, perhaps clear to the claim agent's office when the time arrives for the patient to receive his compensation.

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THE TREATMENT OF CHRONIC ARTHRITIS WITH SPECIAL REFERENCE TO END RESULTS*

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A considerable number of valuable contributions have appeared in recent years on the treatment of chronic arthritis, some based on the observation of a large number of cases, yet there is no definite plan proposed that is applicable to all instances. This emphasizes the fact, which is becoming generally recognized, that each case of chronic arthritis presents special problems by itself. In this respect it resembles diabetes.

Few diseases are subject to greater confusion than those of joints, the incomplete knowledge of the same being evidenced by the variety of terms applied to the same disease. Any classification that is suggested should be as simple as possible, and for the present the term chronic arthritis is

comprehensive as any. It is possible that chronic myositis can be closely associated with it, yet a distinction should be made between them. To attempt a differentiation based on clinical signs or pathological changes is unsatisfactory, while an etiologic classification is equally confusing.

The deforming feature is not always present and varies so in degree that it also can not be used as a criterion in all cases.

All cases of arthritis should be regarded as chronic where the symptoms have extended beyond one year.

The treatment can be considered under three heads: 1, removal of infective foci; 2, local therapy to the affected parts; and 3, general care of the patient.

It is the consensus of opinion that practically all cases of chronic arthritis are due to some infective agent. The connection with a previous infectious process can not always be established, and the infective focus is not demonstrable in all cases, yet these exceptions do not abrogate the rule just set forth.

No disease condition has been more often associated with focal infection than arthritis in its various forms, the true appreciation of this fact being largely due to the brilliant work of Billings (1) and his co-workers. The percentage of demonstrable foci varies considerable in the studies of larger groups of cases.

In Pemberton's (2) series of 400 cases studied at the United States Army General Hospital No. 9, a careful analysis of surgical foci gave the following results: 293 persons of the 400 cases (73.25%) showed demonstrable surgical foci; 208 (71%) of the 293 cases showing foci had the infective focus in the tonsils; 134 (45.73%) of those showing demonstrable foci were positive for a dental focus; 78 (26.62%) showed a combination of both dental and tonsillar foci; 50 (17%) were positive for a genito-urinary focus.

As regards the progress of this series of 400 cases: 34 (8.5%) recovered after the removal of foci; 31 (7.75%) were improved after the removal of foci; 28 (7%) were unimproved after removal of foci; 184 (46%) recovered in the presence of a demonstrable focus; 92 (23%) recovered in the apparent absence of a demonstrable focus.

In a thorough analysis of the results of tonsil-

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lectomy in 200 consecutive cases of myositis and arthritis, Lillie and Lyons (3) state that a marked improvement resulted in all cases after tonsillectomy. In 79% of the 200 cases dental foci were removed at the same time. These observers make the further statement that the size of the tonsil has no bearing on its possibility as a focus, and furthermore that the absence of disease of tonsils does not eliminate this organ as a focus.

It is generally conceded that the most frequent sites of focal infection as related to chronic arthritis are the teeth, the tonsils, the genito-urinary tract, the sinuses, the bronchi, the gall bladder, the gastro-intestinal tract, the pancreas and the vermiform appendix.

Chapman (4) has reported 66 cases in which special treatment was directed towards removal of infective foci, with the result that 50% of the cases according to clinical observation showed definite improvement.

Focal infection has thus become a byword in connection with chronic arthritis, and no plan of treatment is complete that does not include the removal of all demonstrable infective foci.

The question of what constitutes pathology particularly in the tonsils and when it potentially operates as a focus of infection is a matter on which there is room for considerable discussion, and it is probable that no conclusions are entirely free from criticism.

Dental foci, although clearly demonstrable by the radiologist, are likewise open to false interpretation. The role of "dead" teeth is by no means clearly determined. We have noted marked improvement after their removal, yet even that was not entirely convincing of their causative significance.

Striking results have been observed in our service of removal of distant foci, as chronic endometritis, ischio-rectal abscess, infected ingrowing toe nail, and chronic pyelitis. Genito-urinary foci require long persistent treatment to insure appreciable results.

Gratifying though the results appear to be following the removal of infective foci, this is only a stage in the plan of treatment. The frequent mistake is made to be content with this, and conclude that further treatment is not necessary and without avail.

General systemic changes while not directly of

etiologic significance must be considered as having at least a predisposing relation to chronic arthritis.

The treatment by dietary regulations as first proposed by Pemberton (5), in his hands at least has been very helpful in a certain group of cases. In the series of 400 cases later reported by this same author, special opportunity was given for studies in metabolism.

While the basal metabolism of chronic arthritis is probably within normal limits, the possibility of disturbance in intermediary metabolism has been established especially in this study of a larger series of cases.

Pemberton states that the response of arthritis as compared with normals under similar conditions to the so-called nephritis test meal indicates a very slight lag in elimination of water, nitrogen, and particularly of salt.

In the study of 40 cases of arthritis one-half showed an abnormally high value of blood creatin.

The lowered sugar tolerance was frequently observed, and this has often been reported by other writers. For clinical purposes arthritis may be classed with diabetes and gout, in that there is in each case a limit of tolerance for carbohydrates on the one hand and proteids on the other.

It is frequently observed that during the fasting period incident to surgical treatment as in the removal of tonsils or the appendix a marked improvement occurs in the arthritic phenomena, which can not properly be ascribed to the surgical procedure. These observations have led to the institution of special dietary regulations as a means of therapy in selected cases of chronic arthritis.

This plan seems best adapted where a demonstrable focus of infection or definite causative agent is not present.

Draper (6) has recently presented an interesting study of patients with chronic arthritis along the line of comparison with the anatomic characteristics of acromegals, referring to a previous study of "the relationship of external appearance of the body to disease."

French observers have previously called attention to the relation of the thyroid gland to chronic arthritis. Vincent (7) states that 68% of acute rheumatic fever cases have thyroid swelling. Paul Claisse (8) has also reported the

general "slowing down" of all functions in certain forms of chronic arthritis. Draper forms the conclusion "that chronic arthritis represents a very profound constitutional disturbance in which forces analogous to those concerned in acromegaly and thyroid insufficiency are concerned. The family and personal history with arthritis patients give of hives, angio-neurotic edema (bee sting effects) and asthma, and in addition, the well known feature of joint involvement seen in serum disease all seem to indicate that there is a relationship between the whole group of phenomena and chronic arthritis."

In regard to the local treatment of the joints and areas affected by the chronic arthritic process, there is no measure that affords such immediate relief and comfort as general baking, usually carried out daily, with one free day each week. It relieves the pain far better than the use of anodynes, and has a good effect on the swelling and stiffness of the affected joints. As soon as acute symptoms have subsided a systematic course of massage should be instituted by an experienced masseur, and the effectiveness of this feature of the treatment will be influenced by the familiarity and experience of the masseur with the problems involved in chronic arthritis. Even where a marked deformity exists through hyperplastic or atrophic changes, a great deal can be done to improve the function of individual muscles and tendons, and thus to a certain extent at least restore functional ability in the joints affected. Special orthopedic appliances are often necessary particularly where the knee joints are involved, to overcome flexion and at times promote fixation of the joint. Walking can not be carried out without great discomfort when the knee joint is partially ankylosed in a flexed position. A stiff knee joint with the limb straight is useful for walking, even though it may be awkward.

As soon as it is possible and the acute symptoms have been relieved the affected joints should be used, and walking should be encouraged as soon as it can be carried out without too much discomfort.

Medicines occupy but a minor place in the treatment of chronic arthritis. Vaccines and the injection of foreign protein as reported by Miller (9) is still in an experimental stage and have but a limited use in any plan of treatment?

In order to illustrate the various phenomena that may accompany chronic arthritis, and in a sense typifies the condition, the history of one case is presented.

A young woman, 21 years of age, Miss C., first appeared for examination January 7, 1919, giving an arthritic history of two and one-half years' duration, involving principally the knees and ankles. She was admitted to the Iowa Methodist Hospital, and remained for her first stay until May 4, 1919. The tonsils and one dental focus were removed during this time. A moderate thyroid enlargement was noted at the beginning, and soon after admission the signs of hyperthyroidism became very marked, continuing during the four months' stay in the hospital. While this condition gradually subsided with rest and appropriate sedative measures, it seriously interfered with the carrying out of the usual therapy for the chronic arthritis. A moderate leucocytosis, 11,000, was present. A low grade of fever continued, and a lowered sugar tolerance was noted at different periods.

The patient returned to her home for the summer, and re-entered the hospital on July 31, 1919. The arthritic condition was more distressing as additional joints were involved and she was unable to walk, but the signs of hyperthyroidism had practically disappeared. A pyuria was noted, and the urinary findings indicated a nephritis.

An examination of the nasal accessory sinuses by Doctor Pearson was negative.

On Aug. 13, 1919, an infected tooth was extracted, which led to protracted bleeding, which continued ten days before it was finally arrested. The coagulation test showed no coagulation at the end of an hour and a half. The arthritic condition was distinctly improved following this, and the signs of infection of the urinary passages disappeared.

On Sept. 9, 1919, two dental foci were removed followed by nine days of bleeding from the gums; the coagulation time was fixed at two hours.

Oct. 4, 1919. Blood condition—Hgb 60%, red cells 2,730,000, leucocytes 9,400. Polys 60%, lymphocytes 34%, basophiles 1%, eosinophiles 2%, transitional 3%. Coagulation times two hours. At this time pyuria reappeared. Renal function test 20% in two hours.

Oct. 10, 1919. Because of the secondary anemia and prolonged coagulation time, a transfusion was carried out, a sister being the donor. The blood state improved following this transfusion.

Oct. 19, 1919. One infected tooth extracted followed by moderate bleeding.

Nov. 20, 1919. Blood state—Hgb 60%, red cells 4,330,000, leucocytes 13,000. Differential—polymorphonuclears 67%, lymphocytes 29%, transitional 4%.

Dec. 2, 1919. Began to walk. General condition better. Urine clear.

Jan. 6, 1920. Blood state—Hgb 70%, red cells 4,379,000, leucocytes 10,200.

Jan. 15, 1920. Suspicious dental focus was removed.

No bleeding. The radiographic findings were not at any time conclusive of an infective focus, and only after the first one, which was a so-called dead tooth, and such marked improvement followed extraction, led to the belief that the other dead teeth might be a source of infection in this particular case. In the endeavor to control bleeding following extraction of teeth, coagulose was used, and each time was followed by a short period of angio-neurotic edema.

Jan. 28, 1920. End of daily fever. Weight better. Improvement in walking, which improved until leaving the hospital, April 10, 1920, completing a stay of nearly thirteen months.

The problem throughout was the element of infection and each time that a focus was removed or cleared up there was a lowering in the leucocyte count, less fever, less distress in the affected joints and improvement in the general condition. The infection manifested itself as periodic pharyngitis, cystitis, nephritis, and infected teeth. As further complicating the condition was the periodic hyperthyroidism, angio-neurotic edema, impaired blood coagulation, with associated bleeding tendency, marked secondary anemia, lowered renal function and sugar tolerance. In spite of all, the outcome was very gratifying, both as to the general state and the arthritic condition.

The case typifies the varying phases of chronic arthritis and the happy result possible by the faithful co-operation of the patient and co-ordination of all possible remedial measures.

There can be no question but that the essential factor in all forms of arthritis is an infective process, although it may not always be clearly demonstrable.

While the removal of the infective foci should be of first importance, the general care of the patient should have an equal place in any plan of treatment. Every case is a matter of individual study. Much depends upon the attending physician. His heart must be in it, and this interest must be manifest at all times, if the fullest confidence of the patient is to be secured. The handling of chronic arthritis resembles in many ways the care of a neurasthenia patient.

Chronic arthritis can only be properly treated in a hospital where every facility for examination is available and all possible forms of therapy can be properly carried out.

These cases naturally come first to the attention of the orthopedist, yet the problems involved in diagnosis and treatment bring them properly within the sphere of internal medicine, although the advice and co-operation of the orthopedic surgeon is a necessary factor in the successful treatment.

Chronic arthritis is one of the most distressing disease conditions and frequently appears quite hopeless, yet every case offers some possibility of improvement and any relief of pain and discomfort, partial restoration of joint function, arrest of the process, and improvement in the general state means so much to this class of patients and is worthy of our very best efforts.

REFERENCES

1. Billings: Ill. Med. Jour. 25:14 1914; 26:164, 1914.
2. Pemberton: Arch. Int. Med. 1920. p. 231.
3. Lillie & Lyons: Jour. A. M. A. 72; 1214, April 20, 1919.
4. Chapman: Ann. Surg., 71; 648, May, 1920.
5. Pemberton: Am. Jour. Med. Science. 146:895, 1913; 147: 265, 425, 1914; 151:351, 1916; 153:678, 1917.
6. Draper: Amer. Jour. Med. Science, 1920, p. 370.
7. Vincent: Soc. med. de hop de Paris, 1908, XXV, 675.
8. Claisse: Soc. med. de hop de Paris, 1908, XXV, 675.
9. J. L. Miller & Lusk; Jour. A. M. A., 66:1756, 1916.

A CLINICAL STUDY OF ONE THOUSAND CASES OF SCOPOLAMINE-MORPHIN ANESTHESIA*

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The formula of scopolamine is $C_{17}H_{21}NO_4 + H_2O$ and this alkaloid was extracted from the root of *Scopolia atropoides* for the first time by Schmidt in 1890. Schneiderlein¹ in 1900 first recommended operations under anesthesia by scopolamine-morphin, a method which consisted essentially in administering to patients subcutaneously, one and a half to two hours prior to the operation, scopolamine and morphin separately to the end of inducing deep anesthesia.

Within a few years about 2,500 operations were carried out under this new method of anesthesia. Von Steinbüchel² and many others reported favorably on the anesthesia obtained in this manner; but Sticklberger³ maintained that the scopolamine-morphin method was adapted only to those cases in which a general anesthetic was absolutely requisite and in which, at the same time, chloroform and ether were contraindicated.

The Schneiderlein method of anesthesia is based upon the fact that the hypnotic and anesthetic properties of morphin and scopolamine combine, while the toxic effects on the respiration and circulation, being antagonistic, counterbalance each other.

Korff⁴ was of the opinion that scopolamine and morphin alone could not always be relied

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upon to produce complete narcosis; and also that the giving of large doses, which complete narcosis necessitates, was dangerous. He therefore divided the dosage, administering the total amount in portions at different times before an operation.

Stolz³ reported 5 cases in which he used Korff's method and failed to get complete narcosis, the use of chloroform or ether being necessary to complete it.

Landau⁴ gives a conservative estimate of the mortality from the use of scopolamine-morphin anesthesia (including only those cases in which death can be reasonably traced to the method, and not to the severity of the operation or the patient's condition) as 2 deaths in 300 cases. This high death-rate he compares with what occurs in chloroform anesthesia, 1 death in 2075 cases, and when ether is administered—1 death in 5118 cases.

Kochman⁵ in reviewing 1200 cases placed the death-rate at 1 per cent, but adds that fully one-half of these cases were past operative aid and that other forms of narcosis were interdicted.

Neuber⁸ gives the anesthetic statistics of large German hospitals and compares them with Gurlt's statistics (1890-1897):

1890-97	{	Chloroform deaths	1 in 2,075
		Ether deaths	1 in 5,512
		Chloroform and ether deaths.....	1 in 7,613
1908	{	Chloroform deaths	1 in 2,060
		Ether deaths	1 in 5,930
		Chloroform and ether deaths.....	1 in 3,410
		Scopolamine-morphine deaths	1 in 4,762

Korff² and Blos⁶ worked out the method of administration and dosage, and, as a result, the following dosage was established: Scopolamine 0.0012 grm. (1/50 gr.) and morphin 0.025 grm. (5/13 gr.), divided into 3 doses and administered hypodermically, three hours, one and a half hours and one hour before an operation. This method was used in 200 cases.

Hartog⁷ recommended a smaller dosage and to complete anesthesia by ether. He got excellent results in 75 cases.

Dirk⁹ used Korff's method in 260 cases and in only 29 cases found that a further anesthetic was *not* required to complete the narcosis.

Israel¹⁰ used a single dose, scopolamine 1/75 gr. and morphin 1/3 gr. in 332 cases. Only 32 cases did *not* require a further anesthetic.

Wood³⁰ quotes statistics: Of Ziffer cases 21.8 per cent were given complete narcosis; Zahrad-

nicky (232 cases) had 100 cases in which no further anesthetic was necessary. In Stoltz's 465 cases, 156 obtained complete narcosis.

Flatau¹² considered the scopolamine-morphin anesthesia risky and cautioned against its application.

A very large amount of the literature concerned with the question consists of the reports of authors who favored the method. Failures generally were ascribed to the use of impure preparations, or to a faulty technique, or to the application of the method to patients who were too feeble.

Caro advised that the method be used only in persons whose heart is found to be sound.

Nicholson¹³ studied the harmful effects of scopolamine. In his opinion no fatal case had been described in the literature, which could be ascribed definitely to scopolamine. He used scopolamine injections in 650 cases and found excellent effects and well known advantages fully manifest in 94 per cent of these cases.

Hatcher¹⁴ reported that "scopolamine and hyoscine are now considered in large doses, but in small doses there is a rise of blood-pressure but little change in the pulse rate. Clinically scopolamine produces sleep without analgesia, if used alone. It is excreted by the kidneys. When used in combination with morphin, there is no antagonism in regard to the action on the respiration."

Hatcher further states that up to 1910 no deaths had been recorded in which the dose did not exceed 1/130 gr. of scopolamine and 1/6 gr. of morphin. He thinks that any attempt to use scopolamine and morphin alone, without the addition of some other drug, is most dangerous.

Ely¹⁵ reported the death of a patient from 1/100 gr. of scopolamine and 1/8 gr. of morphin.

Gwathmey¹⁶ states that the contraindications to this form of anesthesia are when, from disease or accident, the respiratory function is decreased, and in all cardiac diseases and other conditions which interfere with the circulation. Graves' disease is also a contraindication. In acute or subacute nephritis small dosage is indicated.

H. C. Wood³⁰ places the death rate at 1 in 250. Some of the minor effects when scopolamine and morphin are used in large doses, according to this author, are intense thirst, dryness of the mouth and throat, and difficulty in swallowing.

Allen¹⁷ states that in 1905 Wood was able to

collect 2,000 cases with 9 deaths, or 1 in 221, and that in 69 per cent of these cases a general anesthesia was necessary to complete the operation. This indicates that this author was apparently aiming at complete narcosis from this method alone.

Allen further states that scopolamine hydrobromide in large dosage depresses the respiration, but when medium doses (1/100 gr.) are used, it is slightly or not at all affected. When death does occur, which the author states is extremely rare, it is the result of asphyxia. Its principal effect is as a cerebral sedative and soporific. Allen says that the drug should rarely be used in dosage higher than 1/150 gr.; in fact, the dose should not be larger than 1/100 gr.

Hendee¹⁹ says that those who used the large dosage have done so with the idea to obtain complete narcosis and have succeeded in some cases, but failed in others. Smaller dosage is used with the view apparently of lessening the quantity of ether or chloroform given at the time of an operation and to avoid the undesirable after effects from either.

De Maurens²⁰ states that the literature up to the beginning of 1905 showed that there were reports of 12 deaths which had been attributed to the use of scopolamine. In an editorial in *Surgery, Gynecology and Obstetrics*²¹ it is pointed out that in 4 of these cases the anesthesia was reinforced by chloroform and in 4 others by ether. De Maurens ascribed these deaths to scopolamine itself. Practically all died as a result of an arrest of respiration accompanied by cyanosis, and coma was often accompanied by Cheyne-Stokes' respiration, suggesting paralysis of the centers in the medulla upon which scopolamine is known to act.

With De Maurens' deductions other authors do not agree.

Ries²² has used scopolamine-morphin in a wide range of major operations. He used it on 72 patients in 92 operations. Where deaths occurred, the anesthetic could not in any way be held responsible. Although several deaths have been ascribed to scopolamine-morphin anesthesia, Ries thinks that the only case that seems to be possibly due to this anesthesia is the one reported by Flatau (*Muench. med. Wochenschr.*, 1903, 28). In all other cases reported, it seems to Ries entirely unjustifiable to blame the anesthetic. Some

are due to the large dosage of morphin administered.

Ries has performed many important radical gynecological operations without a drop of chloroform and others with small quantities of chloroform, varying from 9 to 25 c. cm. He has not noticed that hysterical patients generally become excited under scopolamine-morphin as Bloss has stated was usual.

Ries uses 1/10 mgrm. scopolamine and 25 mgrm. (1/3 gr.) morphin divided into 3 doses. If this dosage does not suffice, larger dosage should not be used, but recourse should be had to another anesthetic.

Stone²³ has performed for twelve years a goodly number of his major operations under morphin-hyoscine analgesia, which generally acts as an anesthetic also. It is particularly applicable to those who fear to, or cannot, take chloroform or ether. Neither shock nor nausea follows its use. His combination is:

Morphin Hydrobromide	1/4 gr.
Hyoscine Hydrobromide	1/100 gr.
Cactoid Hydrobromide	1/64 gr.

which is given hypodermically forty minutes before the operation. Some patients are ready for the knife before this time, while others require half of this dose repeated at the end of the first forty minutes. Resections and amputations have been performed under this form of analgesia, the patient feeling no pain whatever. If the analgesia is not complete, a few inhalations of chloroform succeed in putting the patient under at once. Stone adds that when judiciously used this compound is practically harmless and is applicable to a much wider field than has hitherto been allotted it.

Terrienn and Désjardins²⁴ have reported that in 26 cases sufficient anesthesia was obtained without any other anesthetic, about the same dose being used in 26 per cent of their cases.

They state that the *advantages* of the method are:

1. Suppression of fear of an operation on the part of the patient and obliteration of the phase of excitation which precedes muscular relaxation.
2. Absolute loss of consciousness and of memory in the majority of cases.
3. Long duration of the sleep (eight to ten hours).

4. Suppression of vomiting, nausea and malaise after waking.
5. Postoperative calm.
6. Absence of albumin in the urine.
7. The great harmlessness which permits tuberculous, cardiac and cachectic patients to be operated on.

According to these authors, the most striking advantages in using scopolamine are that anesthesia lasts a long time after waking and that in all cases the patients never complain of their wound during the first two days, which is not the case ordinarily after other anesthetics have been used.

The *disadvantages* brought forward are:

1. The variability as regards the action of scopolamin in different patients (not substantiated in our series of cases).
2. Vasodilatation which necessitates very careful hemostasis, the danger being the formation of hematomata. (This was a negligible factor in our series.)

Stone states that up to 1916 twelve deaths from scopolamin-morphin anesthesia have been reported, and these occurrences have prompted detractors of the method to state that they "may be attributed to scopolamine." The author gives short summaries of the 12 cases so as to prove that in no case could death be traced to the use of the anesthetic, and adds that in many instances operators blame the anesthetic for this untoward result; whereas the cause is something else, the admission of which would be quite embarrassing. He is of opinion that in many cases the use of scopolamine is a distinct advance in surgery.

Caminiti²⁵ states that the percentage of cases in which scopolamine by itself does not suffice to give complete narcosis varies from 25 to 70 per cent; hence the addition of chloroform is necessary.

Jenkins²⁷ used scopolamine as a general anesthetic but abandoned its use, because:

First: It seemed to abet a freer flow of blood from the raw surfaces.

Second: Of nonrelaxation of the muscular bundles.

Third: Of the possibility of damage to the brain and intellect.

If the use of any other drug could do away with these untoward occurrences, adds Jenkins, we would have an anesthetic which is very pleas-

ant and safe and simple; but until that special drug is discovered, scopolamin, as a general anesthetic, is not entirely devoid of grave dangers.

Caminiti combined 1/100 gr. of scopolamin with 1/4 gr. of morphin. One-third of this was injected one hour before the time of operation; the second one-third one-half hour later, and the remaining third just before the operation.

This author's experience covered only 3 cases. In one of these there was some evidence of sensation of pain. How anyone can draw conclusions, in regard to a surgical problem of such vital importance, by studying clinically only 3 cases, is beyond my comprehension.

Smith²⁸ says, 1, that the employment of scopolamine-morphin *before* the *administration* of *chloroform* does not add to the danger of the latter; 2, that it is especially valuable in the case of nervous women requiring gynecological and abdominal operations; 3, that it reduces the mental distress prior to an operation.

This author also asserts that scopolamine-morphin markedly reduces the amount of the anesthetic required, does away with the retching and vomiting on the operating table, and produces sleep for a considerable time following an operation, and that no untoward effects were observed by him.

A bottle containing 1/50 gr. scopolamine plus 1/2 gr. morphin suffices for three injections, according to Smith. One-third is given two and a half hours before operation, the second one-third one and a half hours and the remaining one-third a half hour. The second or last one-third is omitted if there is a marked fall in the respiration and an important change in the pulse.

Rood²⁹ records 400 *cases of general anesthsia preceded by scopolamine.*

Judged by his results, he thinks it is safe to conclude that the method has many advantages from the operator's standpoint, and from that of the patient, the terrors incident to the preliminaries of an operation being either blotted out or robbed of their magnitude, which, in some cases, is a very real advantage. He contends that it also diminishes the discomforts of after-pain, etc., by lengthening the period of unconsciousness, and that postanesthetic vomiting is also lessened. Further, from the point of view of the

operator, the quiet respiration and relaxation, which are usually obtained, are of great assistance.

Finally, the author asserts, there is the undoubted advantage of being able to substitute, with equally good results, a safe drug, such as ether, for a dangerous one, such as chloroform.

Grevson¹⁸ reports 69 cases of general anesthesia with scopolamine-morphin and comments very favorably upon the combination.

During a period of fourteen months (1919-1920) approximately 1,000 cases were operated upon by the writer at the American Hospital, Chicago, under scopolamine-morphin anesthesia, supplemented either by ether or nitrous oxide. The operations were general surgery of the extremities, operations upon the abdomen and contents, upon the nervous system, gynecological cases, etc. The observations were made by the writer and the senior anesthetist of the American Hospital, Dr. Harry S. Solomon. Not a single death was caused by the method of anesthesia practiced, which was as follows:

Thorough examination of the patient with special reference to the cardiovascular and renal apparatus. Preparation of the patient the day before the operation. Have the room darkened and absolute quiet enforced. This is imperative. In wards, screens should isolate the patient from the rest of the ward. The external auditory canal of the patient is plugged with absorbent cotton and all noises and disturbances excluded. The drugs used are scopolamine hydro-bromide and morphin sulphate—of the former 1/100 gr. and of the latter 1/6 gr. This dose is repeated once: the first dose three hours and the second dose one hour before the operation. The above dosage is used in patients between the age of fifteen and sixty years. The dose is decreased according to the age of the patient. In those of seventy and over, 1/200 gr. scopolamine and 1/16 gr. morphin are used—not more than two doses. Those patients who have not reached the age of fifteen are not given scopolamine. This form of anesthesia is supplemented by nitrous oxide-oxygen or ether, or a mixture of both, depending upon the type of the case and indications or contraindications in the respective patients. Chloroform is banished from our work. The method is not used in obstetrical surgery.

CONCLUSIONS

Scopolamine-hydrobromide-morphin anesthesia, supplemented by No. 2 or ether, as required, is a distinct advance in narcosis, and with experienced supervision perfectly safe.

The failures of earlier observers are due to reliance on scopolamine exclusively as a means to induce narcosis. Therein lies the danger; and recognizing the danger it can be forestalled. Chloroform should never be used as an adjunct to scopolamine, but nitrous oxide and ether should be given preference. The *advantages* of this method of anesthesia are:

Suppression of operative fear in the patient.

Absolute loss of consciousness.

Amnesia as to preparation, etc., incident to the operative procedure.

Continuation of sleep four to eight hours after the operation is completed.

Elimination of postoperative nausea, vomiting and the harmful straining incident to it. Complete relaxation of the viscera and prevention of such unpleasant complications as pneumonia and shock. The method should never be entrusted to the untrained and the surgeon should supervise and direct the procedure. Occasionally the respirations will be found to drop to six or even four per minute; but, inasmuch as the scopolamine is rapidly eliminated by the kidneys, no ill results will follow if the glottis is prevented from obstructing respirations during the period of complete anesthesia. No complications were observed in our series of cases, and the method was found to be a most excellent one. It is our belief that this method possesses a great many advantages over the usual methods of narcosis which are practiced today.

To obviate postoperative acidosis and relieve the dryness of the oral membranes and also thirst, as well as to replenish the vascular system with fluid, the patient is given, directly he is put to bed, an enteroclysis of 3 quarts of tap water at about 100° F. to which 4 drachms of sodium bicarbonate have been added; in shock the addition of some brandy is necessary. It goes without saying that when operations are done about the vagina, rectum and perineum, as well as in cases of perforative appendicitis and extensive resection of the lower bowel, the enteroclysis is omitted. To avoid excessive distention the colon

tube should never be introduced higher than 3 inches in the lower bowel. *This is imperative.*

REFERENCES

1. Schneiderlein: Aertzl. Mitt. aus und f., Baden, 1900, No. 10.
2. Korff: Muench. med. Wehnschr., 1902, xlix, 1133.
3. Stolz: Klin. Wehnschr., 1903, xvi, 1131.
4. Landau: Deut. med. Wehnschr., 1905, xxxi, 1108.
5. Kochmann: Ther. d. Gegenw., 1903, v, 202.
6. Bloss: Beitr. zur klin. Chir., 1902, vol. 35, 565.
7. Hartog: Muench. med. Wehnschr., 1903, No. 46.
8. Neuber: Arch. f. klin. Chir., 1909, lxxxix, 1113.
9. Dirk: Deut. med. Ztschr., 1905, No. 2, p. 21.
10. Israel: Quoted by Landau.
11. Ziffer: Monatschr. f. Geburts h. u. Gynäk., 1905, xxi, 20.
12. Flatau: Muench. med. Wehnschr., 1903, No. 28.
13. Nicholson: Jour. Amer. Med. Assn., 1909, lii, 1096.
14. Hatcher: Jour. Amer. Med. Assn., Feb. 5, 1910.
15. Ely: New York Med. Jour., 1906, p. 799.
16. Gwathmey: Anesthesia, New York, Appelton, 1914.
17. Allen: Local Anesthesia, 2nd Edit., 1918.
18. Greven: Muench. med. Wehnschr., 1903, 1, 1383.
19. Hendee: Am. Med., 1906, xl, 216.
20. De Maurens: Semaine méd., Paris, Jan., 1905.
21. Surg., Gynec. and Obst., Chicago, 1905, i, 539.
22. Ries: Ann. Surg., 1905, xlii, 193.
23. Stone: Am. Jour. Surg., 1916, xxx, 25.
24. Terrien and Désjardins: Presse méd., Paris, 1905, xiii, 137.
25. Caminiti: Gazz. d. osp. e. d. clin., Milan, 1911, xxxii, 59.
26. Rochard: Bull. gén. de thérap., Paris, 1907, cliv, 353.
27. Jenkins: Kentucky Med. Jour., 1915, xiii, 493.
28. Smith: Surg., Gynec. and Obst., 1908, vii, 414.
29. Rood: Brit. Med. Jour., 1911, ii, 653.
30. Woods: Pharmacology and Therapeutics, 2nd ed., 1916.
31. Steinbüchel: Centralbl. f. Gynäk., 1902, No. 48.
32. Sticklberger: Wien klin. Wehnschr., 1902, No. 51.

DIAGNOSIS OF NASAL ACCESSORY SINUS DISEASE*

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It is needless for me to point out the importance of recognizing nasal accessory sinus disease. This would involve a discussion of the entire subject of focal infection, as well as those acute or chronic sinus involvements in which general systemic symptoms usually associated with foci of infection are not apparent.

The chronic form of sinusitis and the one I desire to speak of tonight is the type that will give the greatest difficulty in diagnosing because all but one or two local symptoms frequently will be absent.

The symptom usually present and the one most complained of is a nasal discharge either a post-nasal dropping or an excessive blowing or a combination. The patient frequently says he has a "catarrh." Incidentally I may state that "catarrh" should not be recognized as a definite disease entity but rather as a symptom, a discharge, and as such, secondary to one or more of several pathological conditions. This discharge may be with or without odor. It may be constant or intermittent. It may be thick and heavy

or watery. The watery type is usually intermittent.

Sharp pain such as characterizes the acute form is usually absent, but the dull heavy headaches are frequently present. The location of the headaches have very little relation to the involved sinus as a frontal empyema may produce occipital headaches and an infected sphenoid may produce temporal or frontal headaches.

A sense of pressure or fullness between the eyes is characteristic of a frontal or ethmoidal infection. The patient may complain of the same feeling in the cheek or between the eyes when the antrum is involved.

Giddiness and vertigo are sometimes present.

Loss of smell due to the closure of the olfactory fissure is frequently complained of.

Disturbances of the eye such as photophobia, epiphora, errors of refraction or accommodation, etc., may accompany the sinus disease, especially when the ethmoids are involved.

Tenderness upon pressure over the affected sinus, which is nearly always present in the acute stage, is absent as a rule in the chronic form. In testing the frontal sinus the pressure should be exerted on the floor of the sinus near the inner angle of the orbit, and over the anterior wall, above the supra-orbital ridge. The anterior ethmoid cells should show tenderness over the orbital plate of the ethmoid at the inner angle of the orbit. In examining the antrum pressure should be made over the canine fossa of the superior maxilla.

A muco-purulent or a purulent secretion may be observed in many cases as it emerges from beneath the tip of the middle turbinate or from above the middle turbinate, depending upon whether the sinuses of the anterior group or the posterior group are affected.

Trans-illumination of the face is a valuable aid in diagnosing an empyema of the antrum, although not conclusive in itself. Three points should be noted with an infected antrum, namely: 1. The luminous pupil is dim or absent. 2. The intra-orbital crescent of light is dim or absent. 3. When the patient's eyes are closed he does not perceive as keen a sense of light in the eye above the affected antrum as in the opposite.

Trans-illumination is of doubtful value in diagnosing a frontal sinusitis and of no value

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in the sinuses other than the maxillary and frontal.

Irrigation or suction of the affected sinus is frequently resorted to, to determine the presence or absence of pus.

The x-ray is of more value, and when combined with the various clinical findings error will be reduced to a minimum. As great reliance frequently must be placed upon the x-ray it demands a somewhat fuller consideration.

As Roentgenography is essentially a shadow transposition of the differential densities of the bones of the skull it is consequently greatly modified by certain diseases and conditions. Briefly these are as follows:

1. Age. In infancy there are numerous modifying conditions such as size, shape, development, etc., of the sinuses and bones of the skull.

2. Sex. Men are apt to have thicker or heavier bones than women.

3. Disease. Such as loss of lime salts.

4. Thickness of bone of face and skull. This may be a localized thickening, a unilateral or bilateral thickening.

5. Asymmetry of the sinuses or bones of the skull.

6. Altered mucous membrane. This may take the form of an excessive thickening due either to infection or as a post operative result, or the alteration of the mucous membrane may be an extreme thinning or atrophy.

7. Inflammation or suppuration within the sinuses.

8. Inflammation or suppuration adjacent to

9. Tumor formation involving the region of the sinuses.

the sinuses or the sinuses themselves.

10. Angle of exposure. Various dense structures such as the petrous portion of temporal, the vertebrae, or the base of the skull may be projected in line with the sinuses, obscuring and interfering with the proper reading of the plates.

In view of the above modifying conditions it is illogical to assume that a diagnosis can be made from the plates alone. A secondary place perhaps should be given to the x-ray and the main reliance should be placed on clinical means. Caldwell was the first to show that the contents of a sinus, whether pus, normal salt solution or water, offer about the same degree of obstruction to the x-ray. Beebe arrived at the same conclu-

sion after injecting the sinuses with liquids of varying densities from water to thick pus. Differentiating between a pus filled sinus and a neoplasm is not always easy although the neoplasm usually involves other structures as well, which somewhat simplifies the diagnosis.

The angle or plane of exposure is important and should be governed by the sinus or sinuses suspected. The custom largely prevalent in the past and at present is to have one sagittal (posterior anterior) view and one lateral view. When the expense is to be considered this perhaps will give as much general information as any other two views, but in the lateral view the ethmoids and sphenoids are superimposed upon the opposite sides and their outlines are confused or blurred. In the posterior anterior views the ethmoids and sphenoids are superimposed and an intelligible reading frequently rendered impossible.

An excellent procedure in my opinion, when general information concerning all the sinuses is desired, is to have three views, one posterior anterior (Caldwell) and two obliques (Rhese).

I recently reported a series of one hundred cases of suspected chronic nasal accessory sinus disease with the x-ray findings¹ and a brief summary of these cases may be of interest.

Where the chief symptoms were a constant nasal discharge without pain or headache there were twenty-three cases (23%). Three of these (12½%) were negative and twenty (87½%) showed cloudy sinuses. Of the positive cases three (Cases Nos. 25, 82, 84) were not confirmed.

In those patients where the chief symptoms were a constant nasal discharge with pain or headache there were seventeen cases (17%), all of these or 100% showed cloudy sinuses. One case (No. 91) was not confirmed.

In the group where a nasal discharge was absent but pain or headaches present there were thirteen cases (13%). Eleven (84½%) were negative and two (15½%) were positive. Neither of these positive cases (Nos. 8 and 30) were confirmed.

There were six cases (6%) of intermittent nasal discharge. Four (66⅔%) were negative and two (33⅓%) were positive. The chief complaint in ten cases (10%) was a post nasal discharge, six (60%) of these were negative and four (40%) were positive. One of the positive cases (No. 83) was not confirmed.

There were nine cases (9½%) whose chief trouble was a constant or intermittent nasal hydropnea. Three (33⅓%) of these were negative and six showed (66⅔%) some sinus disease, of the six positive cases, one case (No. 99) was not confirmed. Six cases

¹Chicago Oto-Laryngological Society, March, 1919.

(6%) suffered from asthma. One patient (16 $\frac{2}{3}$ %) had negative sinuses, the remaining five cases (83 $\frac{1}{3}$ %) were positive. Tumor formation other than polyp were present in seven (7%). All (100%) revealed cloudy sinuses on the affected side. There were four sarcomas, one carcinoma, one lympho-endothelioma, and one fatty cyst of the frontal sinuses and orbit (Dr. Suker's case). Six cases (6%) had a polypoid degeneration. All (100%) showed one or more sinuses cloudy. One case (No. 1) was interesting inasmuch as the polyp which was filling the posterior portion of the inferior meatus apparently had its origin from the antrum. There were two cases (2%) of chronic atrophic rhinitis (ozena). One case (1%) of hay fever. All three cases positive although confirmation was not obtained in the hay fever patient (case No. 16). One case (1%) was post operative, that is about six months after both sphenoids had been opened and the middle turbinates removed incidental to an acute infection of the antrums and sphenoids. At the time the plates were taken there were no symptoms or clinical evidence of trouble. The plates showed the outlines of the sphenoids and antrums were not clear.

CONCLUSIONS

1. The diagnosis of chronic sinus disease offers more difficulties than that of an acute sinus involvement due to the absence in the former of most or all of the localizing symptoms.

2. The x-ray is a valuable addition to the clinical means of diagnosis, but should not be considered as conclusive in itself. The various modifying conditions mentioned above should be considered.

3. A persistent nasal discharge with pain or headache is the most suggestive combination of symptoms.

25 E. Washington St.

TREATMENT OF PARA NASAL SINUS DISEASES IN RELATION TO SECONDARY INFECTIONS FROM THIS SOURCE

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It has been for more than ten years a widely known and accepted fact that sinus empyema can and does cause secondary infections in more or less distant parts of the body.

As early as 1892 Ziem of Dantzic published in the Medical Weekly of Munich the report of a case of eye disease caused by sinus infection and refers to a report made by E. Berger of Paris in 1890 and to studies by himself in 1885. The

report of 1885 is probably the first report definitely linking the sinus with secondary infections.

Kuhnt, Posey and others contributed observations ten or fifteen years later and in 1907 Sir E. St. Clair Thompson reported two cases of ophthalmic disease resulting from sinus infection, and in the same year Fish of Chicago published an extensive article in the *British Medical Journal* containing a table of 44 collected cases. Some of these cases were personal observations in various clinics, some were verbatim reports and some were reports of cases where the observer had not especially noted that the ophthalmic disease was a direct result of the sinus infection. The review of the literature was very incomplete, as no dates or publications were given.

This article was followed rapidly by others, both by Fish and other authors, and I think I am correct in saying that from this date began the general professional interest in the para nasal sinuses as a source of secondary infections. Only at this date did the ophthalmologist begin to include in his routine examination of the eye an examination of the nose and sinuses.

In his later articles Fish included many secondary infections which we now know to be due to teeth and tonsil infections, and laid the blame on the para nasal cells. It may have been he who invented the non-suppurative type of sinusitis which, admitting its existence, would allow operations on any sinus no matter how innocent its appearance. Thus after doing valuable work he lost cast in the profession due to his too intensive mental focus on one structure.

Then, as I say, began the search of the sinuses by the ophthalmologist for the source of the eye infections. But the product of the search was, while not absolutely insignificant, so small as to be very disappointing. Only rarely did we find a sinus source for our ophthalmic diseases, and we were obliged to depend again as formerly, largely on elimination, rest, moist heat, salicylates, etc. Then along came the Presbyterian group with the results of their investigations into teeth and tonsils and we began to orient ourselves more easily.

Empyema of the para nasal cells may cause and does cause secondary infections in a great variety of structure, but they are not the etiological factor in anything like the number of

cases in which either the teeth or the tonsils play the important role. This is due to the fact that these cells are normal bone cavities lined with a protective mucosa which does not readily lend itself to giving infections to distant parts of the body. The sinuses are not newly formed, tightly closed pathologic cavities like the root abscess, nor are they in soft tissues, like the tonsils, the vessels and lymph channels of which easily carry infections.

Seaman quotes Tilly, but from whom Tilly gets his statistics I have been unable to learn, to the effect that about 70 per cent. of the entire population suffer with sinus disease and that 40 per cent. of all patients who seek nasal treatment have sinus disease. In any event, we know that we see a vast number of cases of sinus disease and rarely have as a result a secondary infection. On the other hand, we see a very great number of cphthalmic and other diseases which might come from the sinuses, but do not originate in that locality. Nevertheless, sinus infection is without doubt the cause of a wide variety of secondary infection.

1. A number of cases of nuero retinitis, nveitis, and scleritis have been noted as well as conjunctivitis, glaucoma, and keratitis. I am a bit doubtful about the glaucoma but of the remainder there is no question.

2. Sinus empyema is the most frequent and important etiologiical factor in facial erysipelas.

3. It has caused many cases of brain abscess and meningitis, and of sinus thrombosis doubtless a few.

4. Rheumatism, both muscular and joint.

5. Cardio vascular and renal disease—and possibly gastric ulcer.

6. Coffin has reported Highmorean empyema as the cause of ozena.

7. In fact, it may be guilty of any of the sins of the other head foci of infections. The most frequent offenders are the maxillary and the ethmoid. Next I should place the sphenoid and last the frontal. This is a fortunate provision of nature as the surgical approach to the maxillary and ethmoid is much easier than to the sphenoid or frontal.

Just at this time interest has been aroused by reports by Dean and Byfield of Iowa City in sinus diseases and secondary infections therefrom in children. The cases reported, about 55 in all,

twelve had arthritis and one arthritis deformans. In eleven cases hemolytic streptococci were found in the sinuses. It would take too much time to go into a review and discussion of these papers. The bacteriological work was thorough and an ingenious device was used for obtaining uncontaminated cultures from the antrum. In some cases removal of the tonsils and adenoids sufficed to cure the arthritis and in others all the sinuses were opened. Operative interference was only advised as a last resort, in which advice I concur. In fact, the writer has opened the sinus of a child but once and that was a frank frontal sinus empyema in a girl eight years of age. The anterior wall was carious and the sinus was large and full of pus, but there was no secondary infection. In children the ethmoid which is present at birth and the maxillary, also usually present, are the two structures most often involved. The symptoms are stuffed up nose, nasal discharge, frequent colds, asthma, lowered vitality, sneezing, headache, and rheumatism, muscular and joint. The writer has never seen a case of arthritis deformans in a child.

Treatment. Removal of tonsils and adenoids, attention to gastro-intestinal conditions and hygiene, outdoor exercise and change of climate, argyrol tampons, etc. I would only think of operative interference in the most serious cases or those when in secondary infections an exhaustive search had focused the etiologiical factor in the sinuses.

In thinking of sinus infection, especially in adults, it must be remembered that all so-called severe head colds or coryza from which there is the discharge of a large quantity of green, yellow or white pus are sinus infections which are being properly cared for by nature. About 99 per cent. of these will clear up with or without medical attention.

When the drainage from these sinuses is inadequate we have the acute sinusitis with pain and discomfort—stopped nose, headache, tenderness, temperature may be as high as 104 and may be normal, dizziness, etc. Most of these will clear up spontaneously after a few days. But a small per cent. will grow progressively worse and professional interference becomes a necessity.

The treatment of all the acute sinuses after diagnosis is established by inspection of the nose,

transillumination, x-ray plates, washing, etc., up to the point of operative interference is much the same. The first effort is to aid drainage by astringents such as cocaine, adrenaline or glycerine and ichthyol, or argyrol applied to the mucosa, dry heat by electric pad, hot water bottle, or hot fomentation. The leucodescent light was highly thought of in these cases by Ballenger, deceased, and I have used it, if not always with success, at least with satisfaction. Then comes suction—negative pressure—with the Muller, Clark or Brawley apparatus. Occasionally a brilliant success is achieved with this device but failure is more frequent. It is always worth trying.

Meanwhile a few days have elapsed, the treatment has helped, the human organism is in process of throwing off the infection, or on the other hand the patient has grown worse and is suffering more acutely.

It will be assumed that the Highmorean antrum is the cell affected. Washing out is the next step—either through natural opening or by puncture. The writer uses a straight Lichwitz trocar passed under the inferior turbinal and puncturing the thin wall of the sinus. In emergencies I have used a spinal puncture needle with success. The cavity is then washed with some mild alkaline solution, the outflow coming through the natural opening. This procedure confirms the diagnosis, and one, two or three washings may cure the case. When there are profuse granulations or polyps in the cavity or, in other words, the condition has become chronic, a radical operation will then be necessary. The old Caldwell-Luc operation perhaps, with the Denker or Canfield modification, is the operation of choice. This operation is not difficult and consists in opening the cavity through the front wall under the lip in the neighborhood of the canine fossa, an opening large enough for thorough inspection. All pus, granulations, dead bone, polypi, etc., are cleaned out along with the entire mucous lining, if it is diseased, and it is of course diseased when these conditions are present. A wad of moist cotton is introduced into the posterior nares and securely packed in; this wad having a string passing through the nasal canal and one through the mouth, the latter for removal. A large opening is then made in the lateral wall of the cavity into the nose,

with or without the removal of the anterior half of the lower turbinal. Closure of the wound in the canine fossa and packing the cavity complete the operation. The patient may then wash out the cavity every morning until such time as it becomes permanently clean or ossifies.

The Ethmoid. Claims have been made for the efficacy of the argyrol tampon for treatment of these cases but as a rule not very much can be done to a chronic ethmoiditis other than by surgical interference, which means cleaning out the ethmoid cells usually with the removal of the middle turbinal which is itself a part of the ethmoid capsule. This may be done with curettes, cutting forceps, or evulsion forceps. This operation has its dangers as that part of the ethmoid in contact with the dura is not thick, so that several cases of fracture of this plate and consequent entrance of infection into the cranial cavity have been recorded, followed by meningitis and death.

The sphenoid may be opened by the same route.

The frontal sinus has in the past, and still does, present peculiar problems and difficulties. The cell is shaped like a funnel, the small end of which is concealed under the middle turbinal and curves backward. This makes entrance through the lower end of the natural opening very difficult. Then again the shape of the cavity lends itself readily to blocking in the funnel shaped entrance by polypi or granulations.

In the treatment of empyema in this region one must, as in the other cells, first give nature a chance and assist in every way possible to obtain drainage without interference surgically.

The obstruction may be due fundamentally to a deflected septum—(this statement applies with equal force to obstructed drainage of the antrum and the ethmoids). Correction of this deformity should, if possible, be an interim operation, but it is often necessary to perform it in the presence of pus in the cavity. However, the intra nasal tissues are of such resistance to infection that prompt healing takes place so that the operation may, if necessary, be performed at the same time as the major procedure.

Very few pathological processes requiring surgical interference have been dignified with such a variety of surgical treatment. The difficulties and failures of frontal sinus operations is clearly evidenced by the great number of in-

struments which have been devised and the wide variety of the technique.

The avenue of approach may be intra nasal or external. The first effort should always be intra nasal except where there is softening of the external plate or there are signs of the pus having broken through either the orbital plate or the supra orbital region.

Without going into the merits of the various internal operations, I will say that the Mosher operation with here and there some slight modifications has become almost standard. It is simple and efficacious and consists simply in cutting off by one means or another the anterior $1/3$ of the middle turbinal and the breaking down of the agger nasi cells with a curette. These cells lie just above the anterior part of the attachment of the middle turbinal to the rest of the ethmoid and breaking them down gives access to the naso frontal duct.

This procedure suffices to relieve the condition in about nineteen cases out of twenty—in the twentieth case one will find the sinus so full of granulations or polyps that no such method as this will suffice. Resort to external operation must be had.

There are also very many external sinus operations, but the Killian with or without modifications is the operation of choice with the Lothrop a close second. Either one of these operations in cases where the orbital ridge is not carious is usually successful and without leaving much deformity.

DISCUSSION

DR. CHARLES ROBERTSON, Chicago: Atrophic forms of disease of the optic nerve are frequently affected by the ethmoidal cell or the sphenoid. Glaucoma is probably questionable. In many of these cases there is excess of osseous tissue in the nasal apparatus with occlusion between the middle turbinate and the septum.

We have a choice as to operation in the antrum as well as in the ethmoid and sphenoid cells. He explained his operation for antrum and ethmoid infections which he thinks is better than any other antrum operation. In this the anterior wall of the maxillary sinus is removed and then the internal wall is removed from the inferior turbinate down to the floor of the sinus. You can easily see the extent of the inferior meatus as you can see a bulge on the inner wall of the sinus which corresponds to the attachment of the inferior turbinal with the side wall of the nose. The wall below this bulge is removed to the floor of the antrum, care being taken to get the edge of the opening flush with the floor of the nose. Then the mucous membrane is cut in the form of a letter x and the

four flaps thus made are reflected from the nose into the antrum. Gauze packing is then introduced into the antrum and out through the opening in the inferior meatus. Then the flaps of mucous membrane are packed into place so they cover the free edge of the bone, holding them snugly in place. Then the antrum is filled comfortably full of gauze and the opening in the cheek cavity closed with silkworm sutures. The dressing is left in the antrum for four or five days when it is removed through the opening in the inferior meatus and out of the nose.

The opening remains permanently the same size as made at time of operation and the turbinates are not interfered with at all. You have a large opening resulting between the inferior meatus and the antrum which ventilates this cavity and really makes it a part of the nose. Cases require no further treatment and should they have a subsequent infection of the antrum the drainage is free enough to have it run a short course. This is the most satisfactory antrum operation known to the author.

There is no need of taking away the mucous membrane or bone unless diseased and in that case of course diseased tissue is removed.

As he understands the Mosher operation, he begins high up and goes through the middle turbinal body into the ethmo-frontal cells, then tears the entire wall out, sacrificing the anterior one-half of the body, then the whole middle turbinal is removed with a snare. This sacrifices the entire middle turbinal. There is a nicer operation which produces a better effect. We go under the middle turbinate body and then back as far as the sphenoid sinus under the middle turbinate, then the curette is turned around and you come forward to the uncinate process, or further if you wish. After all cells are broken down the middle turbinate is fractured at its superior attachment and pushed outward to its natural position. You do not disturb any of the turbinate process. A probe can pass under and external in the new cavity formed and still have a normal middle turbinate.

He considers these two operations a distinct advance in the treatment of these two diseases. In the first place, the middle turbinate body must necessarily be saved because it has a physiological function. I have done this maxillary antrum operation for eight or ten years and the opening remains constant. In the ethmoidal operation, the turbinal fracture heals very rapidly and in two or three days you do not know you have operated. There is no absorption of turbinal tissue afterward and it retains its normal function. The Killian operation one of the essayists said is the operation of choice. There is only one choice in this operation, and that is to leave it alone. I do not think Killian does it himself and certainly we do not over here. The only place to do this operation would be in some of the cases that Dr. Ballenger showed in which the ethmoidal cells extend over the orbit and in those cases the drainage of pus has to go up hill, and as it never does that a modified operation is in order. The Killian operation is almost obsolete.

DR. G. J. MUSGRAVE: I would like to emphasize the value of the method described by Dr. Robertson to gain

access to the ethmoidal cells. The real danger of the ethmoidal operation is at the initial puncture. Here the orbit may be entered and only slightly posterior and superior the cribiform plate may be punctured; further posterior we may proceed boldly with no danger at all. However I think it cannot be claimed that mere entrance with a limited degree of drainage and ventilation is adequate in a very large percentage of cases. Thorough exenteration is at once just as easy to perform and simplifies the post operative care and insures speedier results.

DR. GEORGE W. BOOT, in regard to the diagnosis of sinus infections, called attention to transillumination of the negro in whom you cannot get satisfactory results.

Another point is accepting the diagnosis of the x-ray man. They do not follow these cases up and he thinks their opinion is usually not very good.

In the treatment of acute sinus infections he has satisfactory results with the use of suction, the head being in the proper position so that the opening of the sinus is at the lowest point.

He has found the Denker or Canfield operation rather bloody.

DR. ARTHUR C. STRONG likes the external operation that Dr. Dean of Iowa City has perfected, for frontal and ethmoid. He goes in laterally at the nasal-frontal articulation and after making that opening all the ethmoid cells are in the field of operation as well as the floor of the frontal sinus. There is no deformity following this operation.

DR. WILL WALTER: I wonder whether we have a right to consider contact infection as focal infection. I think not, as focal infection is generally understood, viz., as carried by the blood stream. Optic nerve affections are from contact where associated with sinus diseases and do not come under the head of focal infections as we are considering them.

Some years ago I had the pleasure of working at Cornell with Dr. Shaeffer, who has recently published a wonderful book on the sinuses. He demonstrated at that time, that in something over 25% of skulls the drainage was from the frontal directly into the maxillary sinuses. In this book he makes this percentage something over fifty. Therefore, in a given case of antrum disease there is large chance that the frontal sinus is back of it—is the primary focus.

It seems to me that the treatment of cures is great because of the anatomy of the individual. There are many cells, as we know, which are without the range of secondary interference.

There are one or two things which the general practitioner ought to know, and one is that the way to cure frontal sinus diseases is not to have them. If a case does not get well within a reasonable time following rhinitis the patient should see a rhinologist and have expert attention.

The most useful thing for the general practitioner to know, it seems to me, is the application of general principles, as mentioned by Dr. Swan, such as suction, drainage and heat. Some years ago I reported a method of autogenous suction which I think is far

superior to pressure which is exerted by making, maybe, too great motion, or making blebs, and so forth. One can by putting the head in certain positions make suction which is quite adequate to relieve these acute conditions, and the advantage is that the patient can apply it several times a day, if necessary, and get the benefit of the negative pressure produced in this way, which is valuable. Then a case usually gets well if we do these simple things and if it does not the patient should see a specialist.

Another thing is that the lining of all these cavities is ciliated epithelium and that when swelling has occurred the cilia are injured and we do not have the resistance that we had before and there is more tendency to recurrence in these cases.

DR. H. C. BALLENGER: I would like to emphasize the point brought up by Dr. Boot, namely that the Roentgenologist's diagnosis should not be accepted as to the cause of the shadow. The Roentgenologist should state whether shadows are present or not but is not in position to judge the cause. The various modifying conditions I mentioned in the first part of my paper should always be borne in mind.

In regard to Dr. Robertson's indication for the Killian operation, I would add to his indications a frontal-ethmoidal empyema with a fistula of the ethmoid cells. I do not believe an intra-nasal operation can cure this type of an infection.

DR. SWAN (closing): When Dr. Robertson calls the Killian frontal sinus operation obsolete he makes a grave error, as the Killian operation or some modification of it is used by the best operators in every large clinic in this country.

The description Dr. Robertson gives of Mosher's intranasal operation for the drainage of the frontal sinus is neither Mosher's operation nor an operation for the drainage of the frontal. It is an operation for the exenteration of the ethmoid, devised by no one in particular.

The radical antrum operation described by Dr. Robertson differs in no material respect from the old operation of Caldwell, Luc, except Dr. Robertson preserves the inferior turbinal. As Denker, Canfield and others advised long ago about the preservation of this structure, there seems to be little if anything new in Dr. Robertson's operation.

With regard to the cases of optic nerve atrophy, Dr. Suker has just pointed out the accepted fact that optic atrophy is not curable.

THE TONSILS AS FOCI FOR SYSTEMIC INFECTION

GEORGE E. SHAMBAUGH, M. D.

CHICAGO

The relation between tonsil infection and systemic disease is too well recognized to need any special comment, except to emphasize the fact that the tonsils constitute the most important focus for systemic infection. This is readily

understood when we recall the fact that few people escape having one or more attacks of acute tonsil infection, which so frequently leave the tonsil the persistent carrier of a focus of infection.

What I am especially interested in discussing here is the very important subject of the recognition of tonsil infection, especially of the chronic types of infection and the conclusions we have reached as regards the indications for removal of the tonsils. These questions should receive our most careful consideration, especially since the recognition of the relation between tonsil infection and systemic disease has brought about a veritable flood of indiscriminate operations on cases where those of us who have been studying this subject recognize no real reason for attributing trouble to these structures. This indiscriminate operating on the tonsils has, no doubt, been the direct outcome of teaching internes and general practitioners the technic of tonsil operations, where these same practitioners have been unwilling or unable to devote that time and study to the subject necessary to acquire an adequate idea of the indications for these operations or to learn to recognize tonsil disease. It is always much easier to teach a man the technic of an operation than it is to train him to recognize the indication for the operation itself.

As regards the recognition of tonsil infection, it is important to keep clearly in mind that there are two types of tonsil infection which may be quite distinct, or may be combined in the same patient. These are the acute and the chronic forms of tonsillitis.

Of the two forms the acute tonsillitis is the more readily recognized, because it alone produces local throat symptoms. The cases of chronic tonsillitis produce, as a rule, no subjective symptoms except as they may be complicated by attacks of the acute process. Patients who complain of attacks of acute sore throat are not always the victims of acute tonsillitis. Many cases of acute sore throat have nothing to do with the tonsil, but are cases of acute pharyngitis. It is highly important for us to differentiate these cases before recommending removal of the tonsils. As a rule where the patient is subject to attacks of acute follicular tonsil infection, the history of the attacks rarely leave room for doubt as to the nature of the trouble, because the symptoms

are too characteristic to permit of mistaking the trouble. It is the milder form of tonsil infection that is likely to be confused with that of acute pharyngitis. I find that the only way to make sure in such cases is to require the patient to return when he is having an attack of sore throat. If the tonsils are the seat of the trouble, these structures and the region about them will show unmistakable evidence of acute infection. It is a serious mistake to overlook these cases of milder tonsillitis, as I am convinced that they are about as frequently the cause of systemic infection as are the more severe cases of acute follicular infection.

It is in the recognition of the cases of chronic tonsillitis where most of the mistakes have been made, and it is therefore the discussion of this subject that I am especially desirous of emphasizing. Many cases of chronic tonsillitis are easily recognized, even by the novice. These are the cases where the tonsils are distinctly enlarged, where the tonsils and the surrounding structures show a marked congestion, quite in contrast to the mucous membrane in the remainder of the pharynx, and where the crypts are filled with broken down cheesy deposits, wrongly designated often as pus.

Moderately enlarged tonsils are often seen, even in adults, which do not appear to be the seat of any distinct chronic infection. Such tonsils are rarely a menace to the individual. Small tonsils, especially where they are submerged, are frequently the seat of a dangerous focus of chronic infection. It is not uncommon in such cases to discover a chronic abscess, from which pus can be expressed, and where the patient gives no history of having had a sore throat.

There is a form of chronic tonsillitis which requires special consideration, because it is the form most frequently met with. It is a form, however, which is least likely to be a serious menace to the patient. I refer to those cases where the tonsils are not appreciably enlarged and where there is an absence of congestion, but where an examination discloses the presence in the crypts of cheesy deposits. These cases are seen so frequently that it seems rather an exception to find this condition absent, especially in adults. I have observed that these cases are often wrongly referred to as having pus in the tonsils. What is our attitude towards this type of tonsils?

They are certainly not normal tonsils, but I am firmly convinced that such tonsils are rarely a menace to the patient, except as the concretions are in themselves an annoyance, when they accumulate in large masses and give an offensive odor to the breath. Where there is a distinct history of recurring attacks of acute tonsillitis, such tonsils should certainly be removed. On the other hand, where the acute reactions are absent, I am inclined to leave such tonsils alone, except in exceptional cases, where the patient is suffering from a serious form of systemic infection and where a careful examination by a competent internist fails to discover any other likely focus. It is in this type of tonsils where the decision for operation should be made rather by the internist than by the throat specialist, because the real reason for the operation is the systemic infection, and not the local condition found in the tonsil.

This may all sound rather too definite and positive, but I am convinced that in most cases where the tonsil should be removed the indications are quite definite and positive to the throat specialist, who is accustomed to make a careful examination and to weigh all the factors in each case. I admit that there will be exceptions when, especially because of the systemic infection, it may seem advisable to remove the tonsils, even where the local findings are not very definite; but these are exceptional cases, and this fact certainly does not justify the indiscriminate work on the tonsils which in recent years has been going on all over the country. One thing I wish to make quite clear: the decision when to operate on the tonsils, as a rule, requires an examination by an expert throat specialist, and cannot be made off-hand because the patient states that he is having recurring sore throat or because the patient has symptoms suggesting systemic infection.

The practice of making cultures from the surface or from the crypts has been shown to give us no information that can assist in deciding whether the tonsils should be removed.

DISCUSSION

(Abstract)

DR. ARTHUR C. STRONG thought one should not remove all hypertrophied tonsils but have a definite indication, and leave the matter somewhat in the hands of the general man to rule out any other foci of infection. A recent case was a boy who was supposed to have

had a tonsillectomy ten years ago but there were remnants on both sides. The tonsils did not seem diseased, but the family physician agreed it was better to take them out, as the boy was anemic and not gaining weight. In dissecting them out he found about a dram of pus behind one remnant. The throat looked normal, and it was not an acute infection, but undoubtedly was the source of his systemic infection. One cannot always tell from the throat what will be found during a tonsillectomy.

DR. WILLIAM A. MANN believed that every diseased and every enlarged tonsil would be better out, but is conservative about taking them out. As it is a major operation we have to be careful and consider the danger.

He thinks very few of the cases show pus when taken out. We find the caseous plugs and if we make smears or cultures we find the hemolyticus and if we take the plug out with a curet you find very easily that the tissue is more or less granular, bleeding easily. That the cheesy plug was the source of infection has been shown by the results. The patients will gain in general appearance and weight.

DR. H. C. BALENGER emphasized the importance of enlarged cervical glands of the anterior group as an indication for the removal of the tonsils. An additional indication in children is frequency of ear attacks. He also asked Dr. Shambaugh his opinion as to the frequency of tubercular infection of the tonsils of the submerged type; whether he has associated the submerged type especially with the former.

DR. G. W. BOOT: I wish to ask the members of the Society whether in their experience patients with high blood pressure bleed more than other patients. In my experience there is no more bleeding in these cases than in the others. In reality high blood pressure expresses the state of the vessel wall rather than the condition of the blood.

DR. CHARLES ROBERTSON: Dr. Shambaugh stated that there were two types of infection, the acute and chronic. In the acute you have the local symptoms exaggerated, a large amount of material going into the system and therefore a large febrile involvement, high fever, great swelling and pain. This is a complete entity and can be determined very easily. It is in the chronic type that we get most of our focal infections. A chronic pharyngitis and chronic tonsillitis are very easily confused. Chronic pharyngitis is very intimately associated with chronic intestinal disease. The sluggishness of the digestive system is accountable for much of this and when that is corrected the pharyngitis disappears with it. We say, then, that an acute infection of the tonsil gives an acute infection elsewhere, relative to the rapidity with which the poison is taken up. Where it is a chronic infection and it is absorbed drop by drop it may not be severe at any time but it is a continuous performance. If you remember, I once brought out some statistics on tonsil absorption in which I showed that 8 per cent. of the people, irrespective of symptoms, exhibit tuberculous change of the tonsils. That is one point which I think the profession has lost sight of. If you can in 8 per

cent. of the people get a nidus of tuberculosis and relieve it you will cure 8 per cent. of the tuberculosis, because it was demonstrated that the tuberculosis went into the tonsil in a fixed and definite manner. In examining tonsils it is not necessary to look at the size and color. There is a certain place where the tonsil is infected and it is nearly always the superior and anterior crypts and these lie in the upper one-third of the tonsil between the superior lobe and the anterior pillar. Sometimes they are very hard to find, but if you will put in a probe you will find these crypts half or three-fourths of an inch deep. In the chornic tonsil it is always infected at the distal end of these crypts and at this point the tissue breaks down. That is the point where the infection goes out into the lymphatics. You must be careful not to mistake an infection in the antrum and posterior nares because they empty through the lymphatics into the faucial tonsil, whereas the tissues above empty into the chain of glands behind the sterno-mastoid muscle.

Another thing I find people confusing is the sub-maxillary gland infections. This infection is never from the tonsil but always from the teeth. An infection after it gets into the lymphatic tissue can travel in any way. There are no valves so any pressure can push pus forward or backward or upward or downward.

One of the main things is the appearance of the anterior pillar. If the anterior pillar exhibits a circumscribed redness, the patient has an infected tonsil. If you examine the crypts of these tonsils you will find that 99.9 per cent will have hemolytic streptococcus. As Dr. Davis says, "the home of the hemolytic streptococcus is right here." I agree absolutely with Dr. Shambaugh that the slaughter of tonsils going on at present is appalling. It has gone so far that hospitals have had to cut down the days on which tonsils can be removed. In St. Luke's hospital they had three days on which only tonsils could be operated on and the Board decided it was destruction and cut it down to two days, and now they are cutting it to one day a week in an effort to make doctors stop taking out tonsils indiscriminately. We have to take them out if they are diseased but many of them I do not think are diseased. I would like to recite the case of a man who traveled all over Europe for relief of arthritis deformans. He was referred to me by an orthopedist; there was nothing but the shell of the vertebrae left. The condition was so bad that he had lockjaw. He could get his arms up to feed himself only by severe labor and had excruciating and constant pain. He had traveled all over and had been to all the different spas in Europe and was sent home in a wheel chair. He was sent to me for examination of the tonsils. There was a little piece on each side not much larger than a Boston bean. I sent the man back to the orthopedist and said that there was not enough tonsil to think about. He said the man had been looked over by men in town and there was no place he could get the infection but in the throat. I therefore removed his tonsils. The man was so stiff he could not lean over to get the blood out, I had to

tip him over. The laboratory reported streptococcus hemolyticus and we had a serum made which was given him in repeated injections. The first injection stopped the pain and in six weeks he began to improve. He could move his head more and the jaws were not so locked. The case was too far gone to stop the progress of disease but not too far gone to stop the pain. It shows what a little thing if fed in will overcome the resistance of the body. It is not so much the question of how much infection goes in but how long the body resistance can withstand the continuous introduction of toxic material.

DR. B. F. ANDREWS: I saw a report recently where a member of a society read a paper on removal of the tonsils and recommended as a prophylactic measure the removal of tonsils in children of three years. In the discussion some agreed with the gentleman and some disagreed and some were so bitter in the disagreement that they "mopped up the floor with him." That was the expression. In my opinion that recommendation is rather too radical. I am frequently asked about the age limits in removal of the tonsils, and I say whenever they are a menace to the welfare of the patient regardless of age they should be removed. That requires a diagnosis, as has been suggested, made by an internist or possibly by a surgeon and certainly by the specialist who is called upon to do the work. When we consider the life history of the tonsils, as they begin in intrauterine life, and are large and active in the later periods of gestation, and during infancy and early childhood, and by the age of eight or ten they begin to atrophy and at the age of puberty they are atrophied, we realize that their presence in an adult of eighteen or twenty is *prima facie* evidence that they are diseased. Whether or not they should be removed is up to the operator to decide.

DR. WILL WALTER: It seems to be about the most difficult thing to decide in a given case whether the tonsil is the cause of focal infection or not. As we gain more experience we doubt more our ability to judge. I do not know the statistics of the Mayo clinic, but they are tremendous. I think the presence of pus in the tonsil rather means, of course, a leukocytic reaction. I think the hemolytic streptococcus is not a cause very frequently in hemolytic reaction. We do not get much pus in that type of tonsil. The streptococcus is the organism that seems to be the enemy of the human body, especially as relates to the chronic infections. Occasionally, however, we find a staphylococcus which is very productive of severe effects. Dr. Alexander saw a case which was very interesting, a quinsy, and I think, by the way, these quinsy cases are apt to have pockets of genuine pus. This case was most interesting; the patient had an acute quinsy which disappeared over night. The patient was all right the next day and there was no appearance of its having ruptured. My decision was that it had ruptured into a vein, and within a few days there was an acute rash all over the body and she was very ill. A few months afterward she had an ankylosis and a few months later the tonsils were

removed and there was a real abscess. The patient is now very much improved.

I am sure we are all very grateful to Dr. Shambaugh for coming out and giving these conservative views of the tonsil operation. However, we are going to diagnose infection of the tonsils and by some such process as he suggests, the process of exclusion.

DR. OSCAR DODD reported an interesting case of focal infection. Several months ago the patient came to him with an infection of the right maxillary sinus also involving the frontal and ethmoid cells. Recently she returned, complaining of rheumatism, and her physician thought that the nasal infection was a possible cause. He opened some ethmoid cells and removed adhesions which followed an operation which she had several years ago, establishing good drainage. This did not seem to relieve the rheumatic condition. Examination of the tonsils did not show trouble of any consequence, though they were slightly enlarged. However, on account of the severe rheumatism with which she was suffering, he removed the tonsils, and the laboratory examination showed a decided infection with streptococcus hemolyticus. A few days after the operation she began to improve and the rheumatic condition has largely cleared up.

DR. SWAN plead guilty to terming the caseous material found in the crypts of tonsils "pus"—caseous pus—to distinguish it from liquid pus occasionally present in the tonsils. I have come to regard all tonsils containing caseous material as more or less of a menace to health.

DR. GEORGE E. SHAMBAUGH: As regards the question raised by Dr. Boot, whether high blood pressure constitutes a contraindication to the tonsil operation: I operated on a number of patients where the first indication was the high blood pressure and I have not experienced any serious bleeding in such a case. The cause for troublesome bleeding is slow coagulation time.

Replying to Dr. Ballenger's remarks: I consider the involvement of the cervical lymphatics, especially the anterior group, as constituting, as a rule, indication for a tonsillectomy.

Replying to the remarks regarding cauterization of the tonsils. Before we knew how to enucleate tonsils I would occasionally employ this method of treatment where the tonsils were causing a great deal of trouble. I have come to the conclusion that the risks from cauterization are a good deal like the risks where the tonsils are only partially removed. The condition left after the operation is often more troublesome than that for which the operation was undertaken.

As regards the question of cheesy concretions found in tonsils: this is not pus, although many physicians use this expression rather loosely when talking to a patient, as it conveys the impression which the physician wishes the patient to have, namely that the tonsils are the seat of a chronic inflammation. I do not consider the presence of cheesy concretions a positive indication for tonsil removal. This condition is found

in most tonsils in middle life. Where there is unusual local annoyance from their presence, we are justified in removing the tonsils. Where the patient is having a more or less serious systemic infection, for which no other cause is discovered, I believe one is justified in removing the tonsils where perhaps the only evidence of tonsil infection is the presence of the cheesy concretions. One must remember too that the patient may have recurring attacks of the acute sore throat with all the clinical characteristics of tonsillitis where there are no tonsils, the reaction being in lymphoid tissue, especially the lateral bands of the pharynx.

DR. WILL WALTER: We had hoped to present a summary of this symposium, but there has not been time as yet. We hope to publish the material because I think we are all interested in seeing it in print.

I wish to thank all of you gentlemen who have taken part in the programs this year, and I am sure we will all get something out of it which is worth while.

RELATIONS OF ENDOCRINE STIMULATION AND SYMPATHETIC STIMULATION

ARTHUR E. LUND, M. D.

CHICAGO

Introductory. This paper will not attempt to give complete reviews of all the factors entering into the topic under consideration. This in itself would require volumes. It is evident, however, that the following must be considered in special details:

1. Sympathetic $\left\{ \begin{array}{c} \text{(Autonomic)} \\ \text{or} \\ \text{Vegetative} \end{array} \right\}$ Nervous System.
 - (a) Origin.
 - (b) Development, Structure.
 - (c) Distribution.
 - (d) Relations to central nervous system.
 - (e) Functions, Effects of Stimulation.
2. Endocrine $\left\{ \begin{array}{c} \text{(Internal secretive)} \\ \text{or} \\ \text{Ductless} \end{array} \right\}$ Glands.
 - (a) Origin.
 - (b) Development, Structure, Innervation, Blood Supply.
 - (c) Functions, Endocrine produced.
Chemical structure.
Action in body tissues.

With all the information available at present it is not possible to give the precise status which we seek. The reasons are chiefly these: it has not been determined accurately what the distribution and functions of the sympathetic nervous system

are, nor have the exact natures and functions of the endocrines been determined.

There is, however, much evidence that various relations exist between the effects produced by the endocrines and the effects produced by the sympathetic nervous system. This account shall by no means consider all of the possible relations of these two factors; but will attempt to give briefly a few of the most evident and probable.

SYMPATHETIC NERVOUS SYSTEM

The nomenclature arrangement, distribution and function of the sympathetic (autonomic or vegetative) nervous system has long been a subject of much controversy, and at the present time there are many details which are not generally agreed upon. I shall not attempt to give a very detailed or complete description but shall include only a few of the best known facts concerning this part of the nervous system. Langley's¹ description of this part of the peripheral nervous system is accepted and used by many investigators and authors (W. B. Cannon-C. W. Prentiss), and is probably best known. Langley terms this the autonomic nervous system and divides it into the cranial, thoracico-lumbar (or sympathetic), and sacral divisions. He describes only an efferent system. The autonomic nervous system may be a developmental vestige from the diffuse nervous system of earlier ancestors, or it may be an entirely new acquisition of comparatively recent phylogenetic development. Embryologically it is developed from the neural crests by migrating neuroblasts. The thoracico-lumbar division has a nearly segmental arrangement while the cranial and sacral divisions do not have such an arrangement. The autonomic nervous system consists of a system of neural ganglia and fibres separate from the central or cerebro-spinal nervous system. The two are connected, however, by the two groups of the so-called preganglionic fibres. In the cranial and sacral divisions the ganglia of the autonomic nervous system are irregularly placed, usually near the structure supplied. The ganglia of the thoracico-lumbar division are placed in a fairly regular series within the body cavity a few centimeters lateral to either side of the midline upon the posterior body wall. From these ganglia post ganglionic nerve fibres go to directly to different

structures, or to various plexuses, and thence to the parts which they innervate.

The cranial and sacral divisions of the autonomic nervous system are not as widely distributed as the thoracico-lumbar division. The cranial division sends branches to the head including the eye. It sends another large branch, the vagus nerve, to organs of the thorax and abdomen. Stimulation of these nerves causes psychic secretion of gastric juice (Pawlow²) and salivary gland secretions; it causes dilation of blood vessels supplying the glands which produce these secretions. Stimulation of the vagus also causes increase of muscle tone in the alimentary tract. Two more effects of such stimulation are the contraction of the pupil of the eye and slowing of the heart rate. An interesting fact to notice is that the nerve from the cranial division has an inhibitory action upon the heart while the corresponding nerve from the thoracico-lumbar division stimulates the heart action; but, in the digestive tract nerves from these centers produce just the reverse effects, the nerve from the cranial division accelerates and the thoracico-lumbar nerve inhibits. Higier⁴ says that the sympathetic does not directly control the gastrointestinal organs but exerts regulatory functions upon the ganglion cells within the walls of these organs. Cannon³ calls the cranial division of the autonomic nervous system a conserver of bodily resources. His reasons are that the retina is shielded from excessive light by contraction of pupil, that the heart is given longer rest periods by decrease in rate, and that digestion and assimilation are aided by the production of the digestive juices together with the increased tonicity of the alimentary tract. Cannon further classifies the sacral division of the autonomic nervous system as a mechanism chiefly for emptying.

The thoracico-lumbar division of the autonomic nervous system, the part which originally received the name sympathetic nervous system, is of very diffuse distribution. It sends branches to many parts of the body which are also innervated by the cranial or sacral divisions. In all cases of such double innervation, the action of each set of nerves is to produce antagonistic effects. Nerve fibres of this division go to the eyes and cause dilation of the pupils, others go

to the heart and cause increase in rate of beat, some go to the liver and cause release of sugar. Still other fibres go to the digestive tract and cause a relaxation or inhibition of digestion. This system supplies blood vessels of the body trunk and viscera, still further reaching fibres go to the erector muscles of the hairs in the skin.

From these facts it may readily be seen that the sympathetic system is chiefly concerned with activities within the body including such processes as production of glandular secretions, circulation, respiration, digestion and metabolism in general. This is in contrast to the cerebro-spinal nervous system which is concerned chiefly with relations of organism to its environment, although it does exert considerable influence over the activities of the sympathetic nervous system.

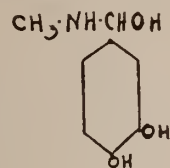
THE ENDOCRINES AND ENDOCRINE ORGANS

Recent investigation and literature upon the endocrine organ are very voluminous. Vincent⁵ gives a bibliography of over 2,100 references. Schafer⁶ gives a very comprehensive, yet brief account of this subject. Some other authorities are Biedl,⁷ Gley,⁸ Falta⁹ and Cannon.³

Endocrines defined—differentiated. Internal secretions or endocrines are usually understood to be physiologically active substances delivered to the blood by the ductless glands and other tissues. At one time the list of the endocrine organs included the spleen, tonsils and lymphatic organs, but their products are of a morphological type. Since CO_2 is produced by the tissues and causes physiological activity nearly all tissues could be called endocrine organs. The present definition of an endocrine is: any definite organic chemical compound, produced by a body organ or tissue, and which acts upon some metabolic process of the body. This rules out such morphological units as produced by the lymphatic organs; the CO_2 which is an inorganic compound, and the digestive gland products which are always of the nature of fermentative enzymes, and act upon foreign material in the body, such as food. All enzymes are destroyed by prolonged boiling but the endocrines are not. Endocrines are also dialysable.

At least one endocrine has been isolated chemically, it has also been produced synthetically. This is epinephrine, suprarenin, adrenin or

adrenalin. Adrenin has been demonstrated to be ortho-dioxyphenyl-ethanol-methylamine.



This may be tested for qualitatively with phosphotungstic acid which produces a blue color even in a very dilute solution of adrenalin.

This substance is very easily oxidized, which accounts for its quick disappearance in the blood. Schafer⁶ suggests the name excitatory autocoids or "hormones" for endocrines of a stimulating nature, and the name "chalones" for autocoids of a depressing nature. The term autocoid is generally used interchangeably with endocrine.

Organs Producing Endocrines. The present list of endocrine organs includes the epiphysis, the pituitary, the thymus, the thyroids, the parathyroids, the adrenals, the pancreas, the ovaries and the testes. This list includes two glands with ducts, the pancreas and testes. Nevertheless, it has been demonstrated that these glands do furnish secretions which do not pass on through the ducts, but are delivered directly to the blood stream. This is proved in the case of the pancreas, experimentally, by ligating the pancreatic duct. Removal of the pancreas very soon produces a rapid and fatal diabetes: but, with ligation of the duct diabetes does not ensue, thus showing diabetes is not caused by lack of pancreatic products delivered via the duct. If the pancreas is removed, some time after being ligated, a fatal diabetes at once sets in. This shows that some secretion had been delivered to the blood by the pancreas even with the duct ligated.

Relative Importance of the Endocrines. The autocoids produced by the epiphysis, thymus, ovaries and testes while essential to normal body metabolism, will not be discussed at any length here due to the lack of experimental and clinical work with them and the necessary brevity of this paper. It may be said that functions of the endocrines of the epiphysis and thymus are but little known, and are, relatively, the least important of endocrine organs. Much work has been done upon the ovary and testis, sufficient to

indicate that they exert a great influence upon the general metabolism of the individual. The most important endocrines are

Thyroparathyroid Group	Suprarenal Group	Pituitary Group
Parathyroids. Thyroid.	Cortical portion of adrenals. Medullary portion adrenals.	Epithelial portion pituitary. Epithelio - neural portion pituitary.

Methods of Study of Endocrine Activities. Partial or complete removal of the endocrine organ, surgically or accidentally, failure of normal development, and pathological destruction of the organ afford means of observing the individual's reaction in the absence of the particular endocrine.

Administration of the gland tissue or extracts by mouth or hypodermics, surgical transplants and over-development of a particular gland furnish a method of determining the individual's reactions to a surplus of the endocrine concerned. Cannon,⁸ Meyer & Lottlieb¹⁰ and others have isolated organs or parts of organs of the body and then applied the endocrines to learn the effect produced.

Parathyroids. The parathyroids are developed, embryologically, as evaginations, from the entoderm of the third and fourth visceral pouches.

There are usually four. In the adults these glands are found just posterior to the lateral lobes of the thyroid. They are from 0.5 to 1 cm. long 2 to 5 cms. wide and about 2 cms. thick. This gland has a thin connective tissue capsule, within which the cells are arranged in irregular groups or cords. The cells are spheroidal, cuboidal or pyramidal in shape.

Schafer⁶ says the parathyroid probably produces a chalone which is antagonistic to a hormone produced by the thyroid, and also antagonistic to the adrenal's endocrine. He says further that the work of those endocrines is to balance the activity of the sympathetic nervous system. The chemical nature of this endocrine has not been determined.

Removal of the parathyroids causes death by tetany. Falta⁹ has shown tetany to result from an over-irritability of the nervous system in the sensory and vegetative parts. This would indicate that the parathyroid endocrine exerted a regulatory effect over certain nervous discharges. That it is not nerve or reflex paths which cause

tetany, but is due to absence of the parathyroid endocrine, is shown by the fact that an isolated parathyroid gland which has been successfully transplanted between the abdominal fascia and musculature will serve the function of a normally placed parathyroid and will prevent tetany.

Thyroid. The thyroid originates in the embryo as a ventral diverticulum in the ventral entodermal wall of the pharynx at about the level of the 4th visceral pouch. The gland develops in two lobes, each lying lateral to the midline at the anterior surface of the trachea a few centimeters above the clavicle. The lobes have a connective tissue capsule from which trabeculae pierce into the gland body. The alveoli are usually lined with a single layer of cuboidal cells. The alveoli are filled with a colloid material.

The blood supply of the thyroid is extremely rich, being exceeded only by the adrenal bodies in richness of circulation.

Schafer⁶ says death occurs within 37 hours after extirpation of the thyroid, although other writers say the gland is not essential to life. The exact chemical structure of the thyroid endocrine is not known. Oswald has shown the thyroid secretion to be a combination of two substances, iodothyreoglobulin, containing iodine, and a nucleoprotein. Fat metabolism especially is affected by the thyroid autocoid. The thyroid apparently supports the adrenals in opposing the pancreatic hormone. The pancreatic secretion prevents the organism from being inundated with sugar by causing the sugar to be removed from the circulation and stored in the liver as glycogen. Adrenalin stimulates a release of glycogen from the liver thus raising the sugar content of the blood. The thyroid hormone stimulates the katabolism of fat and protien.

Clinical demonstrations of cases of thyroid hypo-function are typical in cretinism and myxedema. A child with hypofunction of the thyroid does not develop symptoms for some time after birth due to the secretion having been supplied by the maternal blood stream. Evidences of improper development may be noticed, however, within the first few years of life. The typical symptoms are an arrest of growth, large abdomen, depressed nose, podgy hands and feet,

weak muscles, the fontanelles may remain open together with incomplete ossification of other bones of the body. The individual is frequently deaf and mute. Interference in other metabolic processes are indicated by a general tendency to obesity with a great increase in sugar tolerance.

As a rule this condition produces a general apathy and sluggishness of the nervous system. In fact, these individuals are idiots. Histological examination reveals a shrunken condition of the cortical cells of the brain. There also appears to be a chromatolysis in these cells. Early administration of thyroid gland or its extracts do much to alleviate these conditions.

Associated with hyper-function of the thyroid, we have increased excitability of the cardiac vagus, and of the nervous system in general. There is also a characteristic exophthalmos condition, and dilatation of the pupil, referable to sympathetic excitation. Hyperfunction is treated by partial removal of the thyroid or by ligation of some of the blood vessels supplying the gland.

Animal experimentation has revealed that removal of the thyroid in very young animals inhibits their growth; this may amount to as much as 50 per cent. Removal of the thyroid causes an increase in the development of the pituitary body. This would indicate that the secretions of the pituitary and thyroid gland produce endocrines of similar functions. Thyroidectomy decreases the activities of the adrenal glands.

Pituitary. The pituitary gland or hypophysis is a compound structure. It has two embryological sources of origin. The posterior lobe arises from an evagination of the infundibulum of the diencephalon. The anterior lobe arises from an invagination of the ectoderm in the dorsal wall of the oral cavity. The two lobes fuse early in the embryo.

It is possible that the pituitary secretion, in part at least, is discharged into the cerebrospinal fluid.

Removal of this gland is usually followed by

death; but, animal experimentation has shown that an animal may live for a considerable time after removal of the gland. Such animals are always dwarfed in stature if the gland is removed while the animal is very young. In these cases the bony structure is not fully developed. There is a tendency to adiposity which is thought to be due to an increased sugar tolerance as in thyroidectomized animals.

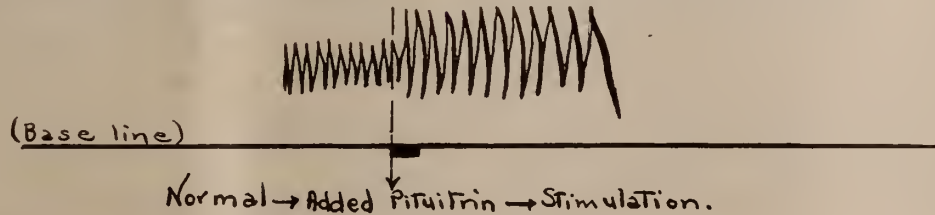
In pathological cases of enlargement of this gland we may find an impairment of vision. This is due to no changes in the retina or other nervous mechanism of the optic apparatus, but is caused by mechanical compression upon the optic chiasm by the enlarged gland. After a continued hypertrophy of the hypophysis the condition known as acromegaly or elephantiasis is observed. Characteristic of this condition is a general enlargement of the bones of the extremities and head. Most noticeable is the protrusion of the mandible which is brought about by its enlarging.

Atrophy of the hypophysis produces, in the young animal, conditions similar to those caused by removal of the gland.

The pituitary endocrine when administered to the normal individual causes a rise of blood pressure. This is not due to action upon the nerve endings but is effected by direct action upon the blood vessels themselves. The heart rate is decreased but force is increased. It appears that the pituitary secretion accelerates the deposition calcium salts in the body as shown by cases of acromegaly.

An interesting experiment is reported by Clark¹¹. In this experiment observation was made upon 655 chickens. For four days these chickens produced 233 eggs, and in a succeeding period of four days during which pituitary gland was fed 352 eggs were obtained or an increase of about 66 per cent.

Here, of course, calcium salt production was increased, but proportionate increase in production of other substances was greater.



Tracing illustrating typical effect of pituitary extract upon section of intestinal muscle beating rythmically in normal blood or Ringer's solution.

Pancreas. Initiation of the growth of the pancreas takes place as out-pouchings from the duodenal portion of the intestine. In the adult the pancreas is found as a slender and very irregular shaped gland embedded within the greater omentum. Attention has been called to the fact, that this endocrine organ has a duct and that the endocrine is not discharged through the duct.

The histological section of the pancreas shows a compound alveoli gland. The walls of the alveoli are composed usually of pyramidal shaped cells with large basal nuclei.

Within the alveoli of this gland are characteristic areas known as islands of Langerhans. These are irregular shaped areas of compactly arranged secretory epithelial cells.

To these is assigned the function of endocrine production. Clinical cases of diabetes coming to necropsy always reveal an abnormal condition in the islands of Langerhans, most probably a degeneration. Hypofunction of the pancreas cannot be successfully treated by administration of extracts of the gland nor by transplants.

Extirpation of the pancreas produces a rapid and fatal diabetes. In this connection a remarkable animal experiment was done. In an animal which had been thyroidectomized the pancreas was removed but diabetes did not develop. This experiment agrees with the functions assigned to the endocrines. The removal of the thyroid increased the carbohydrate tolerance which permitted the animal to cope with the increase of sugar in the blood caused by removal of the pancreatic endocrine. This would suggest thyroidectomy for diabetic individuals but apparently such treatment has not been investigated.

Adrenals. The adrenal glands arise from the mesodermal genital ridge in the embryo, and in the adult are found as a cap on either kidney. Because of their position they are sometimes called the suprarenal bodies. This gland is composed of two portions histologically. A medullary portion which contains chromaffin cells, and which Balfour suggests may arise from the neural crests similar to the origination of the sympathetic ganglia. Because of such an origin Elliott¹² says innervation of the adrenals

should be of a preganglionic nature. This would be in contrast to innervation of other endocrine organs which is of postganglionic type.

The outer portion, or cortex of the adrenals is composed of a cord-like arrangement of nearly cuboidal epithelial cells. Schafer⁶ suggests that this portion of the gland may produce lipoids and be especially related to the development of the myelin sheaths of nerve fibres. Neuman claims the adrenals have the most abundant blood supply of any part of the body, the influx being 6-7 cc per gram per minute.

Removal of the adrenals causes death within two or three days, death in this case is preceded by lowering of blood pressure, pulse, temperature and respiration; convulsions occur also.

Pathological changes usually cause hypofunction of the gland and produce the disease known as Addison's disease. One of the characteristic symptoms of this disease is the yellow or bronze color of the skin. The discoloration of the skin usually occurs in irregular areas. Addison's disease terminates fatally after a brief course. Treatment by administration of the gland or its extract have no effect on the course of the disease.

Cannon³ has studied activities of the adrenal in considerable detail. Previous to this Dryer had demonstrated that stimulation of the splanchnic nerve caused an increase in the production of adrenin.

Cannon's experiments on animals showed a stimulation of adrenin production in fear, pain, rage and emotional excitement in general. A biological method was used to determine the adrenin present. The apparatus consisted of a strip of intestinal muscle suspended in the blood under test. This apparatus detects the presence of adrenin one to 200 million parts. Movements of the muscle were recorded automatically upon a revolving drum. Normal blood permitted the muscle to go through a regular rhythmic series of contractions, but blood having a higher percentage of adrenin inhibited the contractions of the muscle, and with some samples of blood the movement of the muscle was entirely stopped. Increase of adrenin in the blood is always associated with an increase of sugar in the blood stream.

Under ordinary conditions the blood contains

0.06 to 0.1 per cent. of sugar, but if the sugar content raises to 0.2 or 0.3 per cent. the kidneys excrete a part and glycosuria results.

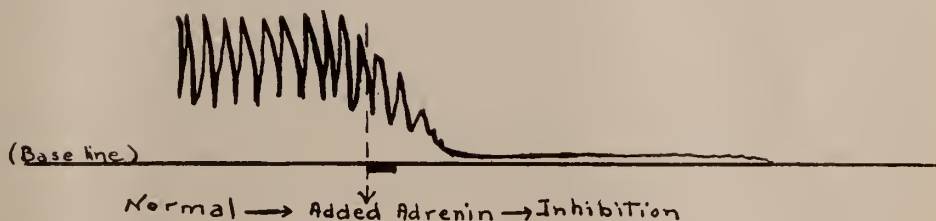
Several cases which show in the human, that emotional excitement increases secretion of adrenin, have been observed. In one group of nine students, normally sugar free, four had glycosuria after a hard examination; in an easy examination only one of this group of students had glycosuria. An account is given of a German officer in the recent war who by his participation in a stressful action received both the iron cross and diabetes. Other instances are given which attribute the cause of diabetes to emotional excitement. In these cases the glycosuria is due to the increase of circulating adrenin.

Besides liberating sugar into the blood and relaxing musculature of the alimentary tract, adrenin drives the blood from abdominal viscera to the heart, lungs, central nervous system, skeletal muscles, and skin. Animals in which the adrenals have been removed do not exhibit the characteristic emotional reactions, i.e. glycosuria, flushing of skin and erection of hairs. Langley says, as a rule adrenin acts the same as a stimulation of the sympathetic nervous system. Elliott confirms Cannon's statement: "It is possible that disturbances in the realm of the sympathetic, although initiated by nervous discharges, are automatically augmented by adrenin."

3 to 5 minutes. Muscle fatigue is similarly removed much quicker by the use of adrenin.

Conclusions. The more we investigate the relations of the activities of the endocrines and the activities of the sympathetic nervous system, the deeper we seem to sink into an intangible maze. How are we to interpret and integrate these relations? Many of our most definite facts have developed simply from a theoretical deduction, and held as such until proof was supplied. Many theories have fallen by presentation of conclusive evidence of disproof, but other theories have held true. Then, to proceed we must ask questions and formulate plausible answers to them. We may ask why is the human body complicated by the presence of the endocrine organs since, in general, they serve only to take up a part of the duties of the sympathetic nervous system? Why not transfer all the work upon the nervous system and do away with these numerous and delicate helpers which so frequently cause trouble through pathological or abnormal conditions? One plausible reply to these and other related questions may be in the following.

Nervous energy represents the highest development of bodily activities and is probably produced at greater expense than any other of the body energies. Therefore it is quite probable that the endocrine glands are added to serve the function of conserving nervous energy. It has been demonstrated, in the case of at least one of these glands, that its greatest action is in times of greatest



The tracing illustrated here shows the typical effects of adrenin upon an isolated section of intestine which is rhythmically beating in normal blood or Ringer's solution.

Investigation of nerve fatigue has revealed that in cases of fatigued nerves the threshold of stimulation raises as much as 600 per cent. Rest restores the normal threshold in 15 minutes to 2 hours; but by administering small doses of adrenin the normal threshold may be restored in

nervous excitation, and that the function it serves is in part similar to that of the nervous impulses. For example, with the increased output of adrenin in fear, pain and rage there is the liberation of sugar into the blood stream, the transfer of much of the blood into the central nervous system, heart, lungs and skeletal musculature in preparation for physical and mental exertion, such as the body may well expect to follow these emotions. All of these activities

could have been produced by simple nervous stimulation, but in cases where such activities are prolonged it is apparent that the demands on the nervous system would be excessive, and fatigue would result very early. This probably presents an insight to the primary and chief relation in question, although there is no doubt that other important relations exist.

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BIBLIOGRAPHY

1. Langley: 1903 "Das sympathische und verwandte nervöse systeme der Wirbeltiere," *Ergebnisseder Physiologie*, BDII, S2.
2. Pawlow: 1902, "The Work of the Digestive Glands," London.
3. Cannon: 1915, "Bodily Changes in Pain, Hunger, Fear and Rage."
4. Higier: 1919, "Vegetative Neurology," Warsaw.
5. Vincent: 1912, "Internal Secretions and Ductless Glands," London.
6. Schafer: 1916, "The Endocrine Organs."
7. Biedl: 1913, "The Internal Secretory Organs."
8. Gley: 1917, "The Internal Secretions."
9. Falta: 1913, "Ductless Glandular Diseases."
10. Meyer & Gottlieb: 1914, "Pharmacology, Clinical and Experimental."
11. Clark: 1915, *Jour. "Biological Chemistry,"* October.
12. Elliott: *Jour. Physiology*, v. 46, p. 289.

FOCI IN THE ORAL CAVITY

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CHICAGO

Mr. Chairman: I will talk for a few minutes about chronic foci in the oral cavity and define their management. I think we may best consider the two principal crowning defects that are found within the oral cavity, as the oral cavity is subject to more pathological conditions than any other region of the body: Consequently, we will consider pyorrhea alveolaris and the so-called chronic abscess or the infected granuloma. Pyorrhea, I think, is an unfortunate name. Dr. Riggs many years ago described the clinical course of the disease and it was called Riggs' disease for a long time. Pyorrhea alveolaris means pus from the alveolus and it is a mistake to name any disease in such a manner. It seems that the name given to it by Dr. G. V. Black more nearly expresses the disease; that is, phagedenic pericementitis, or a process which destroys the tissue that holds the tooth in the socket. There are many other conditions which cause pus around the teeth and these I think should be differentiated. Irritation of any kind in a field which is constantly bathed in bacteria will produce pus around the teeth and is a mixed infection. The etiology of pyorrhea is, I think, practically unknown. There is probably no distinct organism that is productive of this con-

dition; at least, it has not yet been isolated. It is a chronic affair. The amebic theory described by Bass and Johns has not been substantiated.

What systemic diseases may arise from this infection? We must consider that the production of other pathological conditions in the body from pyorrhea occur in two days; the one a simple toxemia; the other by emboli being more serious. In all probability most of the organisms which are swallowed are destroyed, but we know that tuberculosis can be produced by tubercle bacilli in milk and why cannot the same process occur from swallowing this pus and bacteria?

The Pathology. It is a chronic condition subject to exacerbations. There is a destructive inflammation of the peridental membrane. We might say that the tooth is swung in the socket by a system of guy ropes. All of you who have been camping know what happens when the guy ropes on one side pull away. That is what happens to the tooth when the fibers on one side are destroyed which accounts for the torsion, rotation or elongation, of teeth affected by pyorrhea. There may be pockets extending along the root—meaning that the continuity of the peridental membrane is destroyed. A fine, slightly flattened instrument may be passed right into that pocket, following the peridental membrane down in the socket, and I would suggest to our medical friends that before making a diagnosis of pyorrhea that they get such an instrument, take a small lachrymal dilator, flatten it on the tip a little and you have an exploring instrument that you can use. The patient may have a salivary calculus inflammation. We see a serumal calculus in combination with the salivary calculus because the gum border is free and in looking at that line you can see the dark line similar to the lead line of plumbism until you take your instrument and scrape away the calculus. This calculus is composed of crystals which irritate. The tooth is in constant motion and in the presence of bacteria this gum is infected. As the disease progresses we have not only the destruction of the peridental membrane but the destruction and absorption of bone,—the real rarefaction of bone, and that reminds me that it is a mistake to call the radiolucent areas seen in skiagraphs rarefactions, because they are not

rarefactions; the tissue is gone, the rays go through. It does not show infection at all. You are the one to determine whether infection has produced that area by destroying the tissue and allowing the rays to go through. The jaw bone will be destroyed and melt away and we will have a recession of the gum as well as atrophy of the gum as the disease progresses. This space about the tooth is filled with granulation tissue. Many times one can take out a tooth that is wabbling around and when you take the tooth out there is no socket there because this granulation tissue is released and immediately fills up the socket. This contains bacteria, pus cells and plasma cells and is an infected area. The socket of that tooth is a bony socket, and it is resistant. There is the cone shape, too, that we will see. The tooth, every time one bites upon it, is forced up into the socket, just like the piston of a syringe and something is going to happen when you press up on the piston of a syringe. Not only toxins but bacteria are going to be forced out into the lymphatic spaces and must certainly get into the blood stream.

Now the influence upon the general economy. People do die from toxemia; people have died of bed sores. We cannot get away from the idea of toxins and the piston action; every time a person closes his teeth on a piece of beefsteak he must necessarily force bacteria from the socket. Most of them are taken care of, of course, destroyed by the lymph nodes and phagocytes. Some of these emboli lodge in certain areas and set up new foci of infection, your primary focus simply being an area of supply, and that is why we have made mistakes in promising a patient that he will get well after he has had the depot of supply removed he is only protected against reinfection, provided he is not simply suffering from the toxin and I think the toxin produced by some of this focal infection can well be classed as a pathological entity. Loss of weight, malaise, loss of appetite, lack of "pep," the patient tired out most of the time—we see this patient "pep" up immediately after removing a focus of infection when it is impossible to lay your hand on a secondary focus. We have the foul breath, the decayed food, the swallowing of pus, the absorption of toxins, from the ulcerated surface of the pockets. We have in the pocket of a well advanced case of pyorrhea about one

tooth certainly about three-fourths of a square inch covered with granulation tissue. One would not tolerate twenty-five or thirty such ulcers on the surface of the body,—the physician or the patient either. Take a suppurating area of sixteen square inches upon the surface of the patient—if they were allowed to continue in that way the physicians and the nurses would be crazy treating the old chronic ulcers. You know how you all go on about varicose ulcers, what a nuisance it is to care for them. It is the same thing in the mouth instead of in the skin.

Now the Treatment. Personally, I think the number of cases of well advanced pyorrhea that can be cured without extraction of the teeth is in the vast minority. I will not include in that the case of gingivitis of various sorts in which for some reason or another a proper or true diagnosis is not made; that is, they are not cases of suppurative pericementitis, but I would not extract all the teeth that have pyorrhea. I do not think the subject is clear enough in our minds that we can point our fingers and say it is absolutely dangerous to leave these teeth in the mouth. The wind is blowing in that direction but I think we can be too radical. It seems best to take out the worst teeth. Those in which by cutting away the gum tissue and thoroughly polishing and scouring away the serumal deposits may be retained. There is a deposit on all these teeth and as the disease begins at the gingival attachment it is going to continue irritating in that place, we do not know the cause but the conditions are present for a reinfection. The condition of the patient should be our guide, as to the degree of radicalism with which these cases should be treated. The physician should be the one to decide whether that patient should or should not be allowed to harbor within his organism any possible infection of any kind. If he cannot, then I should say get rid of all. If he is a robust individual who has never had kidney insufficiency, is not subject to rheumatism, or suffering from an endocarditis or an iritis, which are dangerous things (that patient's heart valves or eye being worth more than all of his teeth as he can live for a long time without any teeth but will have a hard time if he loses even one, or both, eyes,) we may be justified in being a little more conservative.

The infective granulomata are chronic infections, probably hematogenous, which occur at the apices of teeth which have lost their pulps viz.: the teeth which have imperfectly sealed apical foraminae, and the man does not live who can fill all the foraminae. The infection of the apical areas and the development of chronic inflammations serve as depots of supply. The onset and course, like pyorrhea, is practically painless, the tooth growls a little once in a while, what the older practitioners called "rheumatic teeth." A little counter irritation and it was all right in a few days, but I think you can elicit a little pain in most of the cases which are infected by a little constant pressure over the apex of that tooth.

The Pathology. Imperfectly filled roots are present in probably 75 to 90 per cent., but in these cases of infective granuloma, or these chronic abscesses, the percentage is down around 10 per cent. occurring at the apices of teeth whose apical foraminae are sealed and the roots filled. There is the rub. It seems to me the best way to avoid this is to avoid the infection. The patient must be educated to seek the dentist before it seems really necessary to seek him, for if the dentist finds the cavity before the patient finds it it will not be so large. We have in these cases an absorption of bone around the apex and the filling of these spaces with granulation tissue which is filled with streptococci, and the same piston acts every time the patient bites, only in a better way. The barrel is closed and there is no exit; these bacteria are forced out and become emboli, which may be destroyed or remain vital and lodge most anywhere. There is no pus, or practically none, unless by secondary infection with the pus-producing organisms. It is a progressive process and the treatment, I think, is the removal of the teeth and curettage of the socket or the resection of the root, curetting the granulomata away. I have resected a smaller number of teeth, I think about half a dozen, in the last year, because if by the resection we do remove all of the streptococcus infection the conditions for reinfection are still there. No one place has been demonstrated as being the principal source of these infections; therefore, the resection of teeth, I think, is to be practiced only in selected and special cases. Why all this controversy? Everyone believes an in-

fecting appendix should come out; every case of pyorrhea is a running sore. There are several reasons; first, because the patient dislikes to lose his teeth. Second, because of lack of pain the patient is no more alarmed than by tuberculosis. We know that tuberculosis carries away many people who if they feared tuberculosis would be spared to long lives of usefulness.

Then the practitioner of dentistry—for years we have been bending all our efforts to the conservation of teeth and the restoration of teeth, and it is hard to get away from that; even though we see the results that have come from our efforts, it is hard to get away from the old practices. Common sense tells us to extract these teeth and get rid of infection, but this is to be determined by the physician. Each case is a problem all to itself, and if the general health of the individual will permit the retention in the body of a small amount of infection, then I am in favor of letting that patient keep his teeth, especially the ones which are more useful and the most important because there is such a thing as a practically useless tooth and a very important one, depending upon the social position of the patient, his means of livelihood and many things. So if the physician decides that the patient can afford to carry about a small amount of infection, let him do that and observe him every once in a while. In this way he can check up and if he remains well he can go on for another year, but do not dismiss him entirely because the condition may become serious at any time.

DR. EUGENE S. TALBOT (by invitation): Mr. Chairman, Ladies and Gentlemen: Dr. Potts has given us a very clear resumé of the conditions of the mouth and there are very few points on which I disagree with him. As he said in the start, perhaps there is no part of the body that is so susceptible to infection as the mouth, and there are so many diseases and so many conditions connected with the mouth that, as the first gentleman said in regard to the skin, the etiology cuts quite a figure. I commenced by researches on pyorrhea in 1878 and I have been doing research work ever since, up to the present time, and my researches have been done upon cases of Bright's disease, diabetes, rheumatism, acute vesicular diseases, asthma, anemia, drug and metal poisoning, auto-intoxication, indigestion, in animals, on horses, cows, monkeys, dogs and guinea pigs, so you see my researches have been extended over a very wide area.

Before we speak of what is called pyorrhea it is necessary that we should understand something about the tissues that are involved, just as upon the skin

and other portions of the body. There are no tissues in the body that are like the alveolar process and the surrounding structures. In the first place, the alveolar process is a constructive process. When the child is born there is no alveolar process; it does not begin to develop until the teeth develop, but when they develop then the alveolar tissue builds itself up around them and holds them in place until the second set begin to come in. The first teeth drop out and the alveolar process absorbs away. When the second set of teeth develop it builds itself up around them and remains until the second set is lost and then the alveolar process is absorbed, showing that it is only present while the teeth are present. When they are removed it absorbs away.

When it first develops itself around the second set of teeth the alveolar process is simply waiting for some irritation to produce absorption. Again, the alveolar process is an end organ. This white space here and the red space along side of the peridental membrane (illustrating on blackboard) is the membrane and this (indicating) is the alveolar process and here (indicating) we have arteries, nerves and veins which come up to the alveolar process as far as the root of the tooth and stop. They are called "end structures." Therefore, the tooth might just as well be a nail or a stick of wood because there is no nourishment entering the tooth at the side. The only nourishment which the tooth obtains from the artery and the nerve and the vein flows up through the end of the root of the tooth, enlarges and multiplies and becomes what we call the dental pulp. There are three points we must bear in mind when studying this disease: First, the alveolar process, a transitory process structure; second, that it is an end organ; third, that the tooth is a foreign structure. If a man lives long enough, say one hundred or one hundred and fifty years, his teeth will drop out of their own accord. If a person is apparently healthy and well the alveolar process will absorb away from malnutrition and autointoxication. At my age, seventy-three, I can force a wooden toothpick through between the teeth. I have never had any trouble, no pyorrhea, but naturally as one grows older the alveolar process absorbs away, due to intoxication from toxic substances operating in the body. The same is true of dogs and all animals. We take the cow as an illustration, raised and brought up in the city of Evanston, we will say, and fed on a monotonous diet such as brewers' grains, as the cows used to be a short time ago. A disease takes place from malnutrition as the result of this monotonous diet, the alveolar process absorbs away and the teeth drop out. The same is true with the alveolar process in all animals as well as humans. Here I differ from Doctor Potts that it is the peridental membrane that is first involved, it is the alveolar process which is first involved. My microscope has shown this repeatedly. Take a tooth the alveolar process of which has partly absorbed away; if you try to extract it is just as firm and there is just as much peridental membrane as if the alveolar process was present. In animals—take the dog as an illustration, which is the best ani-

mal to study this disease, because all dogs have it. It is present in 25 per cent. of dogs over four years of age, in 50 per cent. at eight years and all dogs at twelve years of age have this disease. A dog at four years is equal to a man at twenty-five or thirty-five, at eight years it is equal to a man from fifty to sixty, and at twelve it is equal to a man aged eighty to ninety years. Now house dogs that have a monotony of diet and live an unnatural life, have this disease just as frequently as the human and all humans have this disease, I have called this disease "interstitial gingivitis," because it is a deep-seated disease and tells us just what is taking place in the alveolar process. Every child over twelve has interstitial gingivitis, but they do not have pyorrhea. We will get to that point in a few minutes. Take the horse, for instance. In the summer it is allowed to go into the pasture and eat the grass; in the fall he is brought into the stable and does not use his teeth any more. He takes the hay with his lips and passes it back into his mouth and consequently there is an itching sensation around the front teeth due to disuse. He catches hold of the stall and bites the wood. It is called cribbing. This occurs for a week or two and is due to the itching and irritation of the blood which has been coming in the parts and absorption is going on in the bone. The same thing is true in regard to climate. Thirty years ago when they built the railway in Switzerland it was found that the men who worked up in the high altitudes suffered with gingivitis and their teeth loosened and dropped out. I visited that country three different times and examined those men and found that they had interstitial gingivitis. There was an inflammation going on with absorption. They developed this as the result of the high altitude. Again, I examined the soldiers as they came back from the Philippines up at Fort Sheridan for discharge. They had this disease, the teeth loosened and dropped out. The same thing was true of the soldiers in Cuba. The same thing was true with many of the English soldiers; in the Boer War they had the same disease that we call scurvy. Thousands of women and children were congregated in concentration camps, scurvy developed and the teeth became loose.

Perhaps in the last year or two there has been more research work in regard to faulty metabolism than ever before. At the last meeting of the American Medical Association in New Orleans a paper was read by a doctor from Washington, who had experimented on ten criminals in Mississippi. He fed those criminals on cereals for six months—I am giving this to you from memory but the paper will be published in the *Journal A. M. A.*—and he produced what he called pellagra, and in the discussion it was brought out that at the time of the war in Italy, where this disease is very prominent, those soldiers did not have pellagra to any extent, the reason being that they were living on Government rations and had better food and consequently did not suffer from the disease. The same thing was true in Syria and in Egypt. If you take a dog, or a guinea pig, or a rat, and feed that animal on a carbohydrate diet, in a very short time

the hair on those animals will become coarse, the skin will become irritated and the alveolar process will absorb away. These experiments have been done within the last year or two with these results, so we have an absorption of the alveolar process first from irritation, then an inflammatory process is set up, and then we have an infection, nothing more nor less than a pyorrhea. We find that about 90 per cent. of our patients have gingivitis and only about 10 per cent have pyorrhea. The pyorrhea, of course, is the result of an infection from the germs in the mouth.

The time is so limited I will not take up the treatment, because Dr. Potts has described that very nicely. I will go on to the abscess formation and show a little different formation. Dr. Potts went into it but not quite thoroughly enough.

For the last ten years I have been working on dogs, doing about all the operations we do on patients. This has been done at Rush and at the County Hospital. I drill holes through the sides of the teeth and inject arsenic. I drill holes in the sides of the teeth and also down through the pulp chamber, coming out at the end of the root. I treat these teeth, removing the pulps, first using the arsenic for destroying the pulps. In the human we leave the arsenic in for about two days and then take out the pulp. In the dogs I use a little larger amount than in the human and allow it to remain in for a week or two. Arsenic is passed through the end of the tooth into the alveolar process. I also use carbolic acid, remove the pulp and then with a probe, winding cotton around it and dipping it into carbolic acid, and pump this through. Then I took creosote, oil of wintergreen, and all the essential drugs we use. I also use air without drugs through the root and into the alveolar process. In every case, no matter whether arsenic was used water or air, there was always an absorption of the bone of the alveolar process. In some of the cases they became infected. It was impossible in using fifty or sixty dogs not to infect some of the tissues. This is the alveolar process (illustrating on blackboard) extending up here and in forcing air down the root of the tooth it would produce absorption in some of them of the entire alveolar process, which is more noticeable through the end of the roots. When the air was pumped in through the end of the root it would produce the absorption clear up to the end of the process. So there is no question but that the alveolar process is the first to be destroyed in this disease. In pumping the air the tissues became infected and the result was that abscesses formed between the roots at the ends of the teeth. The process would absorb away the fibrous tissue still remaining and the abscess would form around the roots.

Dr. Potts spoke of the alveolar abscess at the root of the tooth. There is quite a difference in these abscesses. The abscess that forms on the end of the tooth is developed by heat, pain and swelling, which lasts about forty-eight hours. Then it distributes itself and remains a fistulous opening and this pus, of course, is swallowed and taken into the system. That abscess is a simple affair and we know how to treat it. We can take that tooth out, which is the right thing

to do. The other abscess, however, which forms outside the peridental membrane we know nothing about. We do not feel it or know it is there and it is the worst condition we have to deal with. That is called a peridental blind, or cold, abscess, and it forms in the alveolar process between the roots of the teeth and, as Rosenow has shown, is taken up in the veins or capillaries and extends all over the body. Here is one of the most interesting things in regard to this matter of the pus germs circulating in the blood. Some fifteen or twenty years ago I did some research work on the pulp itself and this is published in the *Journal A. M. A.* It is singular that in each tooth there is only one nerve, one artery and one vein and they are very small, but as they enter the tooth they multiply and form the dental pulp. In some of these teeth that were removed I found as many as three or four abscesses in the pulp of the tooth. At that time I did not know why they formed there, but it is easy to understand that when pyorrhea takes place the blood vessels in the pulp are affected by these germs. In one tooth there were three, one just forming, one fully developed and the third an abscess healed.

I do not see at the present time any way of treating these teeth except to remove them. In 1880 the first gold crown was invented and since then we have tried to save every tooth. With the gold crown we were able to attach bridges and crowns and do all sorts of things, even if the teeth were loose, and now we are reaping the folly of it. Almost every person over the age of thirty-five has eight or ten dead teeth in his mouth and a dead tooth is no different from a dead kidney, eye, or toe. It is a source of infection and should be extracted. I do not see any other way out of it.

DR. WILL WALTER: One thing always occurs to me in these apical abscesses. I do not know how consistent it is with the dental view, but I am always impressed with that that bacteriemias are more common than we realize. I believe we get bacteriemia that is transitory very often and it has occurred to me that these apical abscesses may be the result of this blood passage. In some cases the bacteria are recovered and in some they are not. In these cases of infection which do not clear up readily we must appreciate that there is a humoral immunity and a tissue immunity and that in cases unduly prolonged the humoral immunity has not developed. It seems to me the bacteriemia would account in many cases for apical abscesses such as have been mentioned.

DR. HERBERT POTTS (closing): I think I have nothing further to add, except to say in so many words that Dr. Talbot and I have the same idea and beliefs. He goes a little further back and has given us in his work the result of his lifelong effort, which we all appreciate very much.

As Dr. Walter has just mentioned, there is no doubt but that we do have periods of bacteriemia and from a prophylactic standpoint, just as I mentioned, the pulps of the teeth must be conserved because we do not have this arrest of bacteria at the apices of teeth

which have live pulps. As Murphy said long ago, the loss of local resistance establishes foci, especially for tuberculosis in the knee and explains somewhat the action of the bacteria at the tooth apex but that is not as yet entirely satisfactory. The teeth with apical abscesses are vulnerable points; consequently, it is best to avoid those points.

DR. WILL WALTER: That coincides with the point given by Irons in the first paper, viz., that there is a lowered resistance, lower phagocytosis around the joints in arthritis; and this vascular condition of the ends of the teeth is exactly like that of the joints and carries out the theory we have expressed.

I think we should realize that the discussion of this focal infection is not altogether a new thing. It is a new name but medicine has always been looking for a cure for chronic sinus disease and chronic mastoid, only now we are doing it for a very definite purpose, viz., to stop the process of disease in other parts of the body.

EARACHE IN ITS CLINICAL SIGNIFICANCE.*

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Earache or pain in the ear usually is the result of inflammation. The process may stop on having caused only the inconvenience attendant upon severe pain of short duration; or the condition in its further development may, and often does, lead to serious consequences. Several factors are in this instance to be considered, for example, the cause, the age and general condition of the patient, and the treatment administered. For the above mentioned reasons, one suffering with earache should invariably be seen at least once by a physician, who should examine the ear with a head mirror and ear speculum to determine the cause, for upon the diagnosis depends his recommendation as to treatment. Unfortunately, many of the laity have the feeling that earache is not of sufficient importance to call in a doctor, unless the suffering is so intense and prolonged that they are unable to control it by one of the many home remedies; very often a comparatively simple case thus treated becomes complicated and a physician is then called in. Had he been called as soon as the complaint was known to exist, in all probability the disease could have been arrested in its incipency.

The causes for earache in the order of their occurrence are:

Acute catarrhal otitis media.

Acute purulent otitis media.

Furunculosis of the canal.

Foreign body: { Impacted cerumen with pus or not.
Foreign bodies introduced from
without such as: beads, insects,
etc.
Chemicals, etc.

Chronic purulent otitis media.

Nasal douches.

Otalgia reflexa, or pain referred from diseased tooth roots, accessory sinuses, and irritation in the fauces or along the esophagus.

Traumatism.

Constitutional disease.

As we all know, the cause of acute inflammation is infection, and its course depends upon the virulence and kind of organism causing the infection, the resistance offered by the patient, and the local conditions which obtain; thus, for example, the streptococcus or the pneumococcus usually is more feared than is the staphylococcus, and certain types of these are more virulent than others. The staphylococcus may be the cause of an inflammatory process which will cause supuration and extension into the bone more or less slowly; while the pneumococcus may penetrate directly the internal wall and set up a fatal meningitis, without having first spread to any great extent, externally. Of course any organism may do any of these things. A strong robust person is more able to resist infection than is, for example, an anemic child, whose supply of oxygen is reduced by an obstructed nose, which condition in itself renders the process of breathing one which requires the expenditure of a certain amount of effort with each inspiration, and whose anemia reduces the oxygen-carrying properties of the blood proportionately.

Bacteria require for growth suitable media, warmth, moisture, etc.; these are to be found in the region under discussion. The great majority of the infectious processes of the middle ear have their source in the naso-pharynx or nose, thus frequently is to be elicited the history of an acute or chronic inflammatory condition in this region, which often is accompanied by vegetations in the naso-pharynx or polypoid degeneration in the accessory sinuses.

Furunculosis or otitis circumspecta may accompany a similar condition elsewhere in the body, but frequently a history of the insertion of a hairpin or other rough object into the ear

*Read at the 46th annual meeting of the Southern Illinois Medical Association, held at Carbondale, Ill., Nov. 4-5, 1920.

will be obtained, which probably has made a slight abrasion, thus affording a point of entrance for infection. Impacted cerumen with an accumulation of debris may become very foul at times, especially if suppuration of the middle ear also is present. Foreign bodies, by injuring the surface or causing obstruction which is followed by putrefaction, may set up great pain. Irritating chemicals may cause pain at once, or injure the exposed tissue so that inflammation and pain follow. In chronic suppurative otitis media where serious bone involvement is not present, pain usually is not a prominent symptom so long as drainage is free. The improper use of nasal douches, which is growing in popularity, is to be condemned as a prolific source of ear infection.

Otalgia dependent upon foci about the tooth roots is sometimes severe and resists all treatment until the cause is located and remedied. The same treatment is true with regard to pain caused by disease of the accessory sinuses. Irritation in the region of the faucial ring and tonsil and along the esophagus, as for example after operative procedures, in malignant growths, and from foreign bodies in the esophagus, sometimes causes severe pain in the ear. The treatment of earache is directed towards relief from the pain and the arrest or removal of the cause. In acute suppurative otitis media with redness of the drum and more or less obliteration of the landmarks, the treatment consists of the constant local application of germicidal drugs which check bacterial growth and have an anesthetic effect without injuring the tissues. Combinations of phenol and glycerine applied locally have proven very satisfactory for this purpose. Rest from exertion, light diet, and a laxative are indicated.

Analgesics, or even narcotics, may be required in addition to the above remedies. In acute suppurative otitis media with signs of pressure, i. e., redness, bulging and more or less complete obliteration of the landmarks, the treatment depends upon the general surgical principle of free drainage, in the presence of an abscess. Under no circumstances should an ear be allowed to rupture spontaneously; there are several good reasons why this is true, and none in favor of allowing it to rupture. The first reason is that it is dangerous to life; the next is that it is much

more likely to cause irreparable damage to the hearing, and another is that the period of convalescence is prolonged. One of the chief objections to opening the drum is the fear of pain at the time of incision, but this can be eliminated.

One of the requirements for bursting of the drum by pus is pressure; in order to get up this pressure, it must be assumed that all available space within the tympanic cavity and that communicating directly with it will have been occupied by pus, since liquid flows in the direction of least resistance. Thus the mastoid by way of the aditus-ad-antrum is invaded and the internal wall also is exposed to pus under pressure. In children the Glaserian fissure, sometimes, is not entirely closed, thus affording a direct pathway to the meninges. When rupture does occur, the drum is likely to be torn in several directions, if the opening is large, thus leaving tags which slough and contract, and thereby render closure of the opening more difficult. Occasionally the spontaneous opening is small, and only a comparatively small amount of pus escapes, and the tendency is for the opening to close up again, only to rupture and after a period of suffering to require drainage after all, and in the meantime the pressure has been kept up to a greater or less degree.

If, when the drum is known to be bulging, it is incised, relief from pain nearly always follows quickly, and the constitutional symptoms, especially in children, subside soon afterwards. The danger to life is lessened, the period of convalescence is much shortened, and by reason of the fact that the loss of tissue is minimized, the healing over of the perforation is more likely to occur, often leaving no trace of its existence, and thus usually insuring no loss of hearing.

After a spontaneous rupture the suppuration is prone, in many instances, to become chronic, with the formation of adhesive processes, and more or less permanent loss of hearing, with the ever-present danger of a suppurative process which lights up anew with every acute coryza, and occasionally without apparent reason. Pain at the time of incision can be practically eliminated by allowing the patient to inhale a few breaths of ethyl chloride which has been sprayed on a handkerchief or by the use of N_2O , or by the local application in a narrow line of a mixture of equal parts of cocaine, menthol, phenol.

This mixture if applied generally to the drum has a tendency to cause sloughing, and for that reason, gas or ethyl chloride is preferred. Of course, the remedies mentioned in the treatment of catarrhal conditions are indicated here also.

Furunculosis of the canal is best managed by the local application of the phenol and glycerine mixture, and incision when pointing, with local application of heat and the other general treatment as indicated above. This very painful condition persists for days or even longer.

Foreign bodies of all sorts are usually most easily removed by syringing, but in the presence of a perforation of the drum, care must be exercised, lest by stimulation of the internal ear the patient becomes faint and falls over, and if force is used a dangerous extension may be caused. The removal of foreign bodies sometimes is quite difficult and a general anesthetic occasionally is required.

Traumatism, e. g., blows over the ear from the hand, concussion from loud noise, falls, the use of hairpins to scratch the ear, the movements of a live insect, all are potent causes for the injury to the ear which usually is accompanied by pain. In constitutional disease such as scarlet fever, measles, mumps, whooping cough, pneumonia, typhoid, lagrippe, tonsillitis, tuberculosis, smallpox, syphilis, etc., earache often is seen, and not infrequently is the forerunner of serious complications.

Briefly in conclusion, it is suggested as good practice that when a person complains of earache it be looked upon as a serious matter, and we may assure the sufferer prompt relief from much distress if a thorough plan of treatment is carried out.

4500 Olive Street.

THE EAR AS THE SOURCE OF FOCAL INFECTION

G. W. Boot, M. D.

CHICAGO

As I understand the subject assigned me the ear as affected by focal infections is not to be considered. This will at once rule out such conditions as acoustic neuritis, degeneration of the organ of Corti, degeneration of the spiral ganglion, otosclerosis, syphilis of the ear, Meniere's symptom complex, larynthritis from mumps and meningitis, and hemorrhage into the labyrinth

from pertussis, convulsions and other diseases. all of which may be the result of focal infections elsewhere.

While various conditions such as glycosuria, convulsions and other nervous phenomena often occur in the course of acute infections of the ear and while there seems to be no good reason why rheumatism, arthritis and neuritis should not occur from chronic ear infections just as they do from chronic tonsillar infections, still the most serious results of infected ears are the conditions that are ordinarily considered pyemic and that result from septic phlebitis of the veins and sinuses in the vicinity of the ear.

The usual condition is a septic thrombophlebitis of the smaller venules that extends to the sigmoid sinus, jugular bulb or some other sinus. This is followed by septic thrombophlebitis of the sinus and then from time to time septic emboli are detached and lodge in other parts of the body giving rise to metastatic abscesses or arthritis as in a patient I saw with Dr. Dillihunt of Portland, Ore. This boy of nine had measles followed by suppurative otitis media and this by bilateral arthritis of the hip and ankylosis of both hip joints in a vicious position necessitating plastic arthroplasty by Dr. Dillihunt to restore motion.

In another patient upon whom I did a sinus operation with ligation of the jugular there was an arthritis in the joints of the toes. In still another I found the jugular vein full of pus, so instead of ligating the vein I slit it open, evacuated about three drams of pus and drained. The patient recovered after a large metastatic abscess over the left trochanter major was drained.

According to Ballance most brain abscesses have a stalk connecting them with their primary focus of infection in the ear, but this has not been my experience and in none have I been able to trace a direct route of infection so that it seems to me to be proper to consider brain abscesses as a result of focal infection.

I have recently compiled all the cases diagnosed as brain abscess occurring in Cook County Hospital since 1910 and have added to these five of my own private cases making a total of 71 cases in all. While no doubt several of these diagnoses were not correct most of them were. Many of these patients were not operated on for

brain abscess but others were by general surgeons and by ear specialists. Of the whole lot but four survived and I had the good fortune to have been the operator in all four.

One very interesting case I saw almost from the start. She was a Jewish girl of 15 who came to the hospital with an acute suppurative otitis media with the drum not ruptured. The resident did a paracentesis. A few days later she returned with an acute mastoiditis upon which I operated. A little later she developed symptoms of brain abscess and meningitis. I reopened the wound, removed the tegmen and explored the temporosphenoidal lobe. When the searcher had penetrated to a depth of 1 cm. upward (it should have gone 2 cm. before entering the lateral ventricle) there was a sudden gush of a greenish cerebrospinal fluid. This was examined at once and found to be full of streptococci. She evidently had an internal meningitis with distended ventricles which ruptured when but half the thickness of the cortex had been penetrated. The abscess was found a little farther back, was opened and drained. She did very well for two weeks, was free from headache, fever and so on but at the end of the two weeks she became drowsy, refused food and died without any recurrence of the symptoms of brain abscess or meningitis. Apparently she had an encephalitis. Post mortem examination was refused.

In some of these cases multiple abscesses occur in the brain as in a case I saw in Vienna where one otitic brain abscess had been drained but at the post mortem another brain abscess as well as a lung abscess was found.

Embolic pneumonia occurs at times from ear infections as in one of my patients whose lateral sinus wall had sloughed off. I was so certain he had a cerebellar involvement needing drainage that I incised the inner wall of the lateral sinus but found nothing. Following the operation he developed an embolic pneumonia, a facial paralysis, a cerebellar hernia and cerebrospinal fluid escaped for a week or more. He eventually recovered from all these complications.

Septic pleurisy and empyema at times result from infected ears. Bezold's Sectionsbericht ueber 73 letale Faelle von Mittleohreiterung is a mine of information concerning the results of ear infections. In his cases he found post mortem:

Leptomeningitis.	Ulcerative hepatitis.
Embolic pneumonia.	Renal abscess.
Pleurisy.	Acute pulmonary edema.
Empyema.	Pyopneumothorax.
Facial paralysis.	Phlegmon of the neck.
Purulent arthritis of the shoulder.	Gangrenous pleurisy.
Fibrinous gonitis.	Hematoma of the medulla.
Pyemia.	Jugular thrombosis.
Abscess of the spleen.	Thrombosis of the vena an- onyma.
Purulent peritonitis.	Thrombosis of the sigmoid sinus.
Lung abscess.	Thrombosis of the transverse sinus.
Cerebellar abscess.	Thrombosis of the superior longitudinal sinus.
Temporosphenoidal abscess.	Verrucous endocarditis at the aortic valves.
Pachymeningitis.	Softening of the brain.
Purulent hydrocephalus in- ternus.	
Panophthalmitis.	
Endocarditis.	
Acute parenchymatous ne- phritis.	

In one of my cases upon whom I did a simple mastoid operation with exposure of the sigmoid sinus there was found postmortem:

Suppurative choroiditis.	with no evidence of disease
Abscesses in the spleen.	in the sigmoid sinus or
Abscesses in the mesentery,	jugular vein.

This list of complications does not by any means exhaust the list of conditions that may result from ear infections.

25 E. Washington St.

DISCUSSION

DR. GEORGE E. SHAMBAUGH wishes to emphasize the point brought out in Dr. Boot's discussion, that the ordinary forms of systemic infection are scarcely ever met with in connection with suppurative otitis media. Of the many cases of chronic suppurative otitis media he has never recognized one where a rheumatic condition has developed from this focus. What we find in the nature of systemic infection is usually through an infection of the sigmoid sinuses. He recalls a case seen several years ago, where there was unquestionably a sinus thrombosis, which caused abscesses in several of the patient's joints, where the patient refused operation and eventually recovered.

DR. G. W. BOOR (closing): One condition which I neglected to mention is an osteitis of the skull, or an infection of the veins of the skull with resulting osteitis and necrosis. This is not a very common condition, however.

A STUDY IN CONTRACT PRACTICE IN CHICAGO*

THOMAS P. FOLEY, M. D.,

Chairman Contract Practice Committee, Chicago Medical Society,
CHICAGO

In 1919 Dr. John V. Fowler, then president of the Chicago Medical Society, appointed a committee known as the Contract Practice Committee. This committee had a representative from each of the fifteen component branches of the Chicago Medical Society.

Early in the sessions of the committee a reso-

*Read before Sangamon County Medical Society, Springfield, Ill., March 14, 1921.

lution was adopted that any member being absent from two consecutive meetings of the committee, without valid reason, was automatically dropped from the committee. Operating under this rule the committee in about two months' time became a compact working organization of five.

The first work of the committee was to compile information regarding compensation for medical services as paid by the City of Chicago, the County of Cook, the State of Illinois, corporations for the care of employees, either for accident or health. We also considered accident insurance companies carrying policies under the Workingmen's Compensation Act, department stores, the packing industries, and, in fact, all branches of the commercial life comprised in the business of Chicago.

One fact overshadowed everything in this study. It was the bald truth that physicians were woefully and outrageously underpaid. The reasons for that condition of affairs will be considered later in this paper.

Early after its organization rumor and story brought to the committee information as to the habit of many accident insurance companies, issuing policies under the Workingmen's Compensation Act, to authorize physicians to treat injured workmen, but when the case was completed and a bill for the services rendered, the company would offer to pay from twenty to fifty per cent. less than the original charge. In most instances physicians meekly accepted what was offered without much protest.

The committee felt that this was a field for constructive work. We inserted a notice in the *Official Bulletin* of the Chicago Medical Society, stating that information of this character had come to us and asking for authentic cases. From the first the committee insisted that all complaints be written and contain facts and no attention was given to rumor, gossip or scandal.

We immediately began to receive information, and taking the most striking cases, the committee published the original charges of the physician, with replies from the various insurance companies, showing their method of reducing decent fees.

One of the first was a letter from an insurance company offering a physician three dollars for the care of a fractured rib in substitution for

his original charge of ten dollars. Publication of this letter with a note advising all members of the Chicago Medical Society to carry all their insurance with this company, but to reduce the premium thirty-three per cent. brought results. A Chicago representative of the insurance company called upon the physician, stating that the letter he had received was all a mistake, sent out by a junior clerk in the absence of the manager; that his original charge was very fair; that in the future he would receive all of their work in his immediate neighborhood and would he kindly sign a statement repudiating the letter as published in the *Official Bulletin*. Naturally he would not.

About the next lesson in pitiless publicity was devoted to the Yellow Cab Company, who had, through an employee, authorized a physician to render first aid to a passenger injured in an accident. When the physician sent his statement for services he received a letter stating the "case had been disposed of." Publication of the plain facts in this case brought forth a bluffing letter from the legal department of the Yellow Cab Company in which they asked for publicity in the *Bulletin*. They got it. Their letter, with the reply of the Contract Practice Committee, was published and shortly after this publicity the physician was paid for the first aid services rendered.

The correspondence published interested another physician who had done work for the Yellow Cab Company and who had sent them bills without result. He entered the controversy, sending in the facts of his case. His letter was then published and within a week he received a call from the representative of the company, who paid him for his services as charged. His bill was two years old at the time.

After sufficient publicity had been given the idea of the committee that in dealing with one member any corporation had to remember that thirty-five hundred members were back of him, we published the idea of the committee as a standard: "Just and decent fees for efficient service."

With publicity complaints multiplied. The committee considered all complaints. Some of them were not within reason and they were returned to the physicians. Every just claim received careful study. A policy of writing to

the physician stating that his complaint had been received and his charges were considered just was adopted. We suggested to the physician that he send a second bill for his services with a copy of the letter of the committee and advise us of results. In many instances the companies promptly settled.

Some companies, however, ignored all communications. To handle these companies the committee went to the Council of the Chicago Medical Society and stated it was a matter of "carrying on" or stopping and recommended that to carry on the work the trustees of the Chicago Medical Society authorize the use of \$500 by the committee for legal expense. This recommendation was concurred in and with a fund behind them the committee started active legal work.

Mr. Robert J. Folonie was engaged as the attorney for the committee. A list of witnesses was secured. These witnesses were volunteers from the rank and file of the society. Men engaged in general practice **without** specialti. Men who could testify that the charge in a certain district was a decent, living charge. Men with "guts" to stand up under fire.

With this organization four cases were sent to Mr. Folonie with instructions to sue. Suit was entered in all cases, but only two went to trial. One case was continued about five times, but finally went to trial and a verdict rendered for the physician for the full amount charged. A second went to trial and a verdict was again entered for the physician for the amount in full. In the other two cases settlements were made without trial, the physician receiving the full amount of his original charges.

Up to the present time the cost of showing physicians what they can do when acting as an organized unit has been \$350, or 10 cents for each member of the society.

In addition to the suits mentioned, the committee at the present time is carrying the expense of a suit in the Appellate Court of the State of Illinois, where an insurance company has appealed from the decision of the Municipal Court of Chicago in the question of jurisdiction. This is a case of interest to every physician in the State because the insurance company is contending that the physician has no right to sue in these industrial cases; that the question of his fees is covered by the Act itself and his only

court of appeal is the Industrial Board. This point has already been decided by the Appellate Court of the State of Wisconsin stating the local court has jurisdiction and the physician has a right to sue for his services in the local court.

The weapons used by the committee have been pitiless publicity, which none of the insurance companies like; an effort to have the medical profession act as a unit, and the most necessary weapon in any war, be it large or small—real money.

We have shown the insurance companies that when they attempt to reduce the just fee of an individual physician they are dealing with thirty-five hundred physicians who will not have their rights belittled. We have shown that while the individual physician cannot afford to engage attorneys and fight legal delays, thirty-five hundred can easily afford it. We have shown them that while the individual cannot spend days in court, we can supply witnesses from a list of hundreds who will give a day each as long as necessary.

All of the above is along the line of action. Why is the action necessary? What are the factors causing the underpaying of the profession?

Reverting to the causes, they are as follows, viz: 1. The "so-called leaders," who have "theirs" and care nothing for anyone else; the "uplifters," who have been boosted by the profession to the top notch and are now out only for the "good of humanity." 2. The foolish, petty jealousies of the medical men themselves over little things in sentiment, forgetting the big thing in medical economics. 3. The fact that many of our medical men have had a peculiar operation where a rubber hose has been substituted for their original backbone, which causes them to accept any "table of fees" anyone hands them. 4. The evolution of the so-called industrial surgeons, some of whom contend that the ordinary practitioner cannot suture a scalp or redress an injury. Most of the industrial surgeons work cheaply because they get the "volume." 5. The entrance into the field of surgery of the individual or firm which underwrites the insurance companies' risk. Accident insurance companies in figuring their expense on which to base a premium charge about twenty-five per cent. for medical expense. This risk is taken off their hands by underwriting at times for about fifteen per cent. of the

premium. In other words, a factory employing say 100 men, on which the accident risk is \$1,000 per year, is underwritten for \$150. Does anyone here imagine services can be given one hundred men under the Workingmen's Compensation Act for \$150 a year? This is a gambler's chance on nothing happening. If anything does happen we can certainly look for a skimping somewhere. 6. One of the most potent causes for underpaying is the professor who works at a reduced rate.

Having considered the causes, what are the remedies suggested by the committee? The one remedy is organization—real organization. Not the occasional meeting to hear some wizard tell about acute collapse of the stomach, but getting a real tip from someone on how to charge enough and then collect it to keep your own stomachs from acute collapse.

An organization based on sound business principles such as associations of commerce, because no matter how your hearts may feel your heads know you are in a business. Payment of sufficient yearly dues to your medical society to make it a real organization. For example, we have howled for two years about contract practice, cheap medical fees, and then our own society expects its secretary to handle its business for \$41.67 a month.

Fifteen thousand regular practitioners in this state have less force and less to say on medical legislation than 400 osteopaths. Why? Because if you show the 15,000 they could get back \$10 each by spending \$1, many of them would hesitate, while the 400 will spend \$100 each to get the \$10.

The Workingmen's Compensation Act provides that the employer will furnish medical and surgical aid and hospital service to the injured employee. At the end of Article 8 it states "the employee may select his own physician, surgeon or hospital at his own expense." Here you have the answer to industrial accidents. Help amend this Act so that the injured workman may secure the services of his family physician at the time of accident, the same as he would in time of sickness. Give the injured man a chance to secure a physician who has not a fifteen per cent. underwriting interest in him, but one who has his best interests at heart; one not only a physician, but a tried and true friend. Such an

amendment will be proposed at this session. If the general practitioners of the State are awake to their interests, it will pass and become part of the law. By becoming the law it not only solves many problems for the medical profession, but gives the injured workmen of the state real medical service.

Above everything as medical men let us learn to protect ourselves by unity of purpose; unity of thought, and unity of action. Study the lessons of practical politics. Let us have less in our own ranks and more outside where a united profession may secure for itself "the right to life, liberty and the pursuit of happiness" guaranteed by the Constitution of the United States.

RENAL FUNCTION IN SALVARSAN THERAPY.

Colman and Kron (*Dermatologische Wochenschrift*), in a very careful paper, publish the results of their examination of the kidneys during salvarsan treatment in five hundred cases. They distinguish six groups of cases:

(1) The reaction of kidneys in patients who, having taken several injections of salvarsan without reaction, suddenly show a rise in temperature.

(2) Reaction of kidneys in patients who show a rise of temperature after the first injection of salvarsan, yet do not react on subsequent injections.

(3) Kidneys of patients who show a salvarsan dermatitis at any period of salvarsan treatment.

(4) Examination of kidneys during salvarsan treatment of patients suffering from nephritis.

(5) Description of functions of kidneys in patients treated with mercury before beginning salvarsan treatment.

(6) Reaction of kidneys during pregnancy treated with salvarsan.

Basing their observation on the fact that sound kidneys are in nowise affected by salvarsan, the authors were led by the idea that in cases of intolerance against salvarsan an effect on the kidneys might be found. Their very minute examination of the function of the kidneys in these five hundred cases, in the groups mentioned above, led them to the following conclusions:

All patients having formerly suffered from nephritis or any kind of infectious disease must be very cautiously treated with salvarsan, an exact examination of the function of the kidneys being absolutely necessary. The method of application, also the quantity of salvarsan given, must depend on this examination.

Examination of urine (albumen and sugar) alone is not sufficient as kidneys can suffer without albumen being found. Summarizing, the authors advise scrupulous choice and every precaution in the application of the drug.

ILLINOIS MEDICAL JOURNAL

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JUNE, 1921

Editorial

THE SPRINGFIELD MEETING

The 71st Annual Meeting of the Illinois State Medical Society adjourned May 19th, after what might be justly termed the most interesting session held by the Society in years.

The weather was ideal, the attendance was much larger than usual. The large registration was especially gratifying because of the fact that the meeting was held at the Capitol City while the Legislature was in session. This latter fact proved a serious drawback from the viewpoint of attendance because of the very limited hotel accommodations. Indeed, as far back as January, physicians contemplating attending the meeting found it impossible to make reservations for the session.

The scientific program was up to the high standard of previous meetings; several well known men from other states attended the session and read papers of a very technical character.

The essay on "Medicine," the Differential Diagnosis of Early Tuberculosis from Other Apical Inflammations, with lantern slides, was given by Dr. Kennon Dunham of Cincinnati, Ohio.

The essay on "Surgery," Prehistoric American Surgery, was given by Dr. Leonard Freeman of Denver, Colorado.

The house of delegates met regularly and transacted a great amount of business that will redound to the benefit of the profession. Great interest was shown by delegates in the business affairs of the Society. For the first time in the history of the House of Delegates all members responded to roll call at the opening session, Tuesday night. The reports of the officers and of the numerous appointed and elected committees were presented in masterly form and demonstrated clearly that the profession is at last alert to the dangers operating at present and that will ultimately destroy the integrity and usefulness of our calling, if not corrected.

Dr. Edwin P. Sloan of Bloomington was elected President-elect; Drs. H. P. Beirne of Quincy, R. L. Greene of Peoria, J. W. Vander-slice, Oak Park, and Chas. C. Humiston of Chicago were newly elected delegates to the A. M. A. We have every reason to expect that the President-elect and the other newly elected officers will carry on a strenuous campaign of efficiency in behalf of the interests of the profession that has characterized the term of their predecessors.

WE TOLD YOU SO WHEN THE HARRISON LAW WAS ENACTED

The JOURNAL has repeatedly called attention to the danger of letting any objectionable law get on the Statute Books. Such laws are never amended for the better, but grow more and more objectionable with the advancing years and they are always enforced by autocratic methods.

When the Harrison law was enacted we were told that the fee of \$1.00 was purely for the purpose of making the law operative. The wise men in the profession knew that this was merely camouflage and were not surprised when the registration fee was increased to \$3.00.

As a further illustration of the trend of the times towards autocracy, we call attention to paragraph six of the letter sent out under date of May 15th from the office of the Collector of Internal Revenue, which reads as follows:

"If re-registration is not made on or before July 1st, 1921, a 25 per cent penalty attaches. For a second or subsequent offense, for failure to register within the required time, the delinquent is liable to prosecution by the United States District Attorney."

This language would clearly indicate that whether a Doctor desires or not to prescribe narcotics, failure to register would subject him to prosecution by the District Attorney. "Oh, tempora! Oh, Mores!"

EXPOSING THE "CON" IN SOCIAL ECONOMY, AND PUTTING THE A. M. A. ON RECORD

The following Resolution was recently adopted by several state societies, notably New York, Illinois, Michigan, etc.:

"Resolved, That _____ State Medical Society is emphatically opposed to 'State Medicine,' and to any schemes for 'Health Centers,' 'Group Medicine,' 'Diagnostic Clinics,' 'Compulsory Health Insurance,' either wholly or partly controlled, operated or subsidized by the State or National Government, and that the delegates from this Society to the American Medical Association be and are hereby instructed to present this resolution to the House of Delegates of the American Medical Association at its coming meeting in June and to use every possible honorable means to secure its adoption."

A few men with red blood in their veins went to the New Orleans meeting of the A. M. A. last year and put over a resolution condemning Compulsory Health Insurance and at the same time called a halt on the machinations of Dr. Alexander Lambert and his consorts of economic tight-rope walkers and medical political milkmaids. Let us hope that the real Americans of the 1921 House of Delegates of the A. M. A. are able to put a quietus on the Soviet Government bugs who are at present using every means possible to put our great organization into disrepute.

WHAT AILS THE MEDICAL PROFESSION?

How few members of the medical profession appreciate the profound change which has come over the relation of the physician to the community.

For the small percentage who realize that things are not as they should be, how many of them can explain the cause for the unrest and dissatisfaction within the profession? How few of them realize that the change in the status of the physician is largely but a phase in the recent extensive developments in sociology and how few of them appreciate that the time when physicians were held in high esteem and in turn placed the physical welfare of their patients over and above their own interests, is a thing of the past.

How few physicians even now realize that as a class, the profession has taken far too little interest in the broader aspects of the profession and that there is danger, unless this attitude is abandoned, of having little or no voice in shaping state and national policies which vitally affect their interests.

Changing conditions warrant a careful study of many problems which lie outside of scientific medicine. Medical practice is a business and requires guardianship, the same as other interests. State medicine, health centers, compulsory health insurance, the national socialization of medicine, the abuse of medical charity by hospitals and dispensaries, lodge practice, contract practice, the over-trained nurse, the unscrupulous pharmacist, the underpaid doctor, the quack doctor, the patent medicine man and the quack druggist are all enemies of the legitimate practitioner, and all

represent interests, designed and propagandized for the purpose of bringing about serfdom of the people.

A strenuous period of economic reconstruction lies before the medical profession. Because of apathy in the past, we have rendered ourselves open to attack and persecution. Opposed as we are on the one hand by the power and strength of health departments of municipalities, state and nation; by dispensaries and hospitals, upheld by the wealth and perverted ideas of philanthropy, prostituted and pursued with the idea that by giving materially in this world, the donors feel that they will in turn reap the benefit in the hereafter—hedged in by the ever-increasing encroachment upon the field of medicine by municipalities under power granted and enforceable by law, weakened on the other hand by the lack of cohesion in our ranks and the desire of a few to lead a parasitic existence at the expense of the many. So, in the socialistic present-day trend of the times in medicine, the physician has his problems to solve and his future to work out.

In view of what has been said, it becomes essential for the profession, in its individual and collective capacity, to inaugurate a constructive campaign in opposition to the evils that are besetting the practice of medicine, and those abuses that are destroying our means of livelihood; to those discriminations that deprive the individual of the right to treat his own patients; to those forms of special privilege that are depriving us of our just rights—these and more should be fought to the bitter end. Though there has been opposition to some of these in the past, it has not been sufficiently strong to prevent the infliction of the evils upon us and the reason for the gradual encroachment of the abuses mentioned has been because the medical profession was not numerically strong and cohesive enough to tear down the offending evils and abuses. At the present time, there are still too many physicians outside the state and county organizations and in our fight to bring about the betterment of the profession, it is one of our primary duties to gather all physicians into state and county organizations: then only can we expect to accomplish our aims to eradicate abuses and enter upon a constructive era.

ATTEMPTED VICIOUS MEDICAL LEGISLATION IN NEW YORK STATE IN 1921. A BAROMETER OF WHAT LATER MAY BE EXPECTED IN OTHER STATES

REPORT OF THE COMMITTEE ON LEGISLATION OF THE NEW YORK STATE MEDICAL SOCIETY

Your Chairman was projected into office at the end of the legislative session of 1920 at which time he found all legislative affairs concerning medical legislation in a chaotic condition. The amended Medical Practice Act which had been agreed upon by the Education Department and the Society had been introduced too late, no support had been given it and it had been defeated on the floor of the Assembly. Assemblyman Kenyon, its introducer, told your Chairman after its defeat that because of its lack of support by the Committee on Legislation and the profession that he would never again introduce any legislation of this kind unless he was assured beyond doubt that he would not have to fight alone against the proponents of quackery. The Chiropractic bill had passed the Assembly and on the afternoon set for a hearing upon it before the Senate Committee on Public Health your Chairman received the following telegram: "You have been elected Chairman of the Committee on Legislation this morning. Please assume your functions at the Chiropractic hearing this afternoon. J. R. Kevin, President." This hearing was entirely pro forma. No work had been done with any individual Senators, no evidence of the evil of the bill had been placed before them and as a result the bill was passed after a short roll call in the Senate and placed in the hands of the Governor. A hearing was had before the Governor and with the aid of the State Department of Health and the Education Department the argument was so forcibly presented to him that he vetoed a bill which should properly never have been before him and would not if the proper kind of work had been done in the legislature. The Cotillo Bill which had been in one form or another presented to the legislature for seven or eight years was withdrawn by its introducer after a hearing at which the Senator scathingly arrayed the persons who asked him to introduce it and practically accused them of deceiving him as to the motives behind the bill. This bill has reappeared this year as will be noted below.

The chief measures of importance to the medical profession introduced at the session of 1921 are as follows:—

1. The Compulsory Health Insurance Bill which this year scored the whole gamut as had been predicted by your Chairman at the first hearing of this measure in 1916, including unemployment insurance, invalidity insurance and old age pensions. At last the bill was introduced by a member of the party to which the measure belongs, the member being Mr. Orr, the Socialist. This bill has slept quietly in Committee.

2. The various measures concerning the Narcotic Drug question. Of these there have been four: The first Lord bill abolishing the Department of Narcotic Drug Control, the second Lord bill re-enacting the main provisions of the old Whitney law without provision for any bureau to make rules and regulations; the second Smith bill practically the same as the Cotillo bill of last year noted above which prohibits the prescribing any narcotic drug to patients suffering from addiction disease, permitting only personal administration of the drug by the physician thus practically compelling the institutionalization of all persons afflicted with addiction disease or driving them to the underworld for their supply of drug. It requires that practically all addicts shall be committed to state, county or municipal hospitals or to private sanatoria or hospitals which have been licensed *ad hoc* by the State Department of Health. It furthermore requires the keeping of records by physicians and official prescription blanks for every case in which narcotic drug is dispensed for no matter what disease and in no matter what amount and for no matter what method of application or administration except it be for external application. It rescinds for the purpose of enforcement of the act the statute of privileged communications. It provides no penalty for the possession of narcotic drugs illegally obtained for illicit use by criminal peddlers of the underworld who are not themselves addicts. It permits the administration of narcotic drug from a stock solution without requiring any record so far as concerns the amount of the individual dosage to each person to whom administered. This would permit hospitals and institution, sanatoria public and private to administer narcotics in any amount they chose without it being in any way possible to check the

amount used on each patient while physicians would be obliged to keep records for every dose administered or prescribed or dispensed either directly or indirectly. It is known and conceded that there are not existent the necessary number (20,000 to 50,000) hospital beds in the State of New York to house the addicts who under this law must, to legitimately be treated, be committed to an institution public or private. The majority of state, municipal and county hospitals practically refuse to accept for treatment cases of drug addiction and even if they did they could not accomodate one-tenth of the number of addicts in addition to their normal population. It may be readily seen, therefore, that but one or a combination of two or more of the following means would be taken:—(1) The addict could be committed to private sanatoria for the treatment of drug addiction and the cost of the maintenance of addicts so committed would fall on the municipality or county from which committed; (2) The addict of either the criminal or, more horribly, of the non-criminal class would be compelled to secure their drug from the underworld peddler; (3) The state, county or municipality would be obliged to adapt old or erect new hospitals to take care of a population of from twenty to fifty thousand patients. And this would have to happen overnight in the same manner as Secretary Bryan's army would leap to arms! Where the scheme is not horrible and inhumane it is ridiculous and at the same time, sinister. The bill is not a local one; a studied attempt is being made to effect it into law in many states and an earnest effort is being prosecuted to have the regulations promulgated by the Federal Bureau having charge of the Federal Harrison Act to give that act the same force as this bill would have if it became law. *Verbum sapienti sufficit!* The first Smith Bill classes drug addiction among the infectious and communicable diseases presumably to give the same power to boards of health and health officers to commit and hold in isolation drug addicts as they now exercise under the same section in cases of smallpox, diphtheria and other infections. This endeavor to so characterize drug addiction was well termed by the Commissioner of Health of the State of New York at the hearing upon these bills before the Governor as "sheer nonsense."

Both of the Smith Bills were opposed at the

hearing before the joint Committee on Public Health of the Legislature as well as at the hearing before the Governor after the bills had been passed by the Legislature, by your Chairman. At the hearing in the Legislature the bills were favored by the Chairman of the Committee on Legislation of the New York County Society, the President and the first Vice-President of the State Society, and others. At this hearing the Chairman of the New York County Society, challenged in open hearing the right of your Chairman to speak for the State Society upon this question without remonstrance from the officers of the State Society there present. This was so obvious that Senator Fearon who had introduced this bill in the Senate took the floor and requested the joint Committee on Public Health who conducted the hearing to permit your Chairman to file with the Committee the proof of his right to speak for the State Society. As an evidence of the disunion and disorganization existing from the Compulsory Health Insurance days this neatly capped the climax. And moreover the source is the same.

3. The Health Center Bill somewhat modified from that of last year, but essentially the same died in committee after a hearing.

4. The Chiropractic Bill, introduced in the Assembly by Mr. Yale of Putman, was referred to the Committee on Judiciary of which Mr. Louis Martin of Oneida was Chairman. This bill was reported favorably after a snap hearing on twenty minutes notice granted by Mr. Martin only after a continuous insistence for twenty-four hours. The hearing was not publicly noticed. Through clever maneuver the very capable legislative agent for the Chiropractors through a second person handed the bill to Senator Wiswall of Albany who, without reading the measure, introduced it in the Senate and who in two days so amended the bill in order to require proper standards of preliminary and professional education on the part of those who sought to be licensed under the waiver clause of the bill, that the chiropractors at the Senate hearing appeared in opposition to their own bill. At this hearing Senator Wiswall accused them of not wishing to meet educational standards and thus not showing good faith. The bill was never reported by the Senate Committee and was recommitted in the Assembly on the second last day of the Session and thus died.

5. The amended Medical Practice Act without the provisions for re-registration of physician providing for prosecution of offenders against the law by the Attorney General instead of by district attorneys was swapped by its introducer for the Chiropractic bill through what seems to your Chairman an error of judgment although done with the best intentions. The fact is that a great number of the Members of Assembly wished neither to offend the medical profession or the chiropractors by going on record upon a vote on either of these measures. Perhaps for this reason the agreement was made to recommit both bills and thus save "the boys" from embarrassment.

6. The bill changing the constitution and method of appointment of members of the Public Health Council which would put this most important advisory body into the field of local politics was defeated in the Assembly.

7. The bill for the purpose of authorizing osteopaths to report births and deaths and cases of communicable disease and giving them all the rights, privileges and immunities of regular physicians was killed in the Committee on Public Health of the Assembly.

It seems important to the Committee that the medical profession should begin to consider seriously the menace involved to the public and public weal and the profession and evidenced by the continuous and persistent efforts of lay groups, highly organized minorities, in association with small but influential cliques of physicians. The end is to secure eventually complete control of the medical profession and to ultimately socialize it. The same groups that were interested in forwarding the scheme for Compulsory Health Insurance are now looking toward State Medicine, the entering wedge of which is the Health Center plan which was to be combined finally with Compulsory Health Insurance.

Regulations as to the use of narcotic drugs and alcohol are merely the beginning of an attempt to completely control therapeutic methods. The various committees that have been appointed by national and state bodies to "investigate" these subjects apparently have had as their foremost requirement for membership thereon the proof of lack of experience with the subject to be considered by them and their reports have always been entirely standardized and apparently written *ad hoc* by an interested group comprising not more than ten men in the medical profession

and a couple of lawyers. Their investigations have not been unbiased, their findings have not been judicial and their reports have largely been *ex parte* formularizations. That a Senator of the State of New York should be obliged to state at a public hearing that a bill which he had been asked to introduce and which had been approved by this State Society was such in its nature that he felt aggrieved and imposed upon and immediately withdrew this bill, is a fact to excite surprise, grief and indignation.

Various cults are cropping up each year which are highly financed and have an extremely active and well paid lobby and a legislative influence that is entirely disproportionate to the number of their adherents. There are probably less than one thousand chiropractors in the State of New York and there are fifteen thousand licensed physicians, but I dare say, the legislative influence of the chiropractors, highly organized as they are, is many times as great as that of the fifteen thousand members of the poorly organized medical profession.

Through the immense propaganda of the various cults, the lay public in the last twenty years have been subtly influenced against the profession of medicine, not against the individual physician but against the so-called "Doctor's trust." Physicians know that these allegations are untrue but they do not even take the trouble to deny them much less do they wish to educate the public to a proper appreciation of what medical science and art is and does. Without this education of the public, it will be impossible to secure their good will and aid, and without either of these any attempt on the part of the profession to benefit the public by means of legislation will fall to the ground.

The representation of the medical profession in the legislature is today woefully inadequate even though we have two members in the Assembly. Efforts should be made to increase this representation in those districts of the state where it is possible. Men should be asked to stand for election and every effort made to secure their election. But most important of all is it that the medical profession clear itself of all the groups and cliques who are striving not mainly for the benefit of the public and the profession but for other and ulterior motives or are acting upon the unshaken judgment that they

must be right and the whole body of the profession wrong; whose chief idea is the formation of compacts with other groups for the purpose of controlling the election to office in the State Society. These evils must be exercised, the Society must be united, it must organize, it must educate the public or if it do not, so surely as the side covers the sand bar, the profession of medicine will become the tool or instrument of forces existing today in the commonwealth, whose sole desire is power attained through absolute control of the medical profession.

The medical profession within the State Society is not in reality organized; on the surface it is, but under the surface the gaps are so great that a torrent could easily pour through them. There is very little cooperation between the county societies and the Committees of the parent body, for instance: The Chairman of your Committee sent early this year to the Secretary of each County Society individual cards for each Senator and Assemblyman representing that county in the Assembly or Senatorial District asking that these men be interviewed at home and their position on the various measures of interest to the public health and the profession be ascertained and the cards properly completed returned to your Chairman. From only 24 of the counties were the cards received in time to be of use; from only 29 of the counties were the cards received by the end of the session and from 33 of the counties no reply has yet been received. Still what criticism would have been hurled at your Committee had any of these measures which they did not desire to pass been carried through and become law! And the larger part of the reason would have been and is due to their own neglect and the pursuance of the policy of letting George do it. Instance after instance could be given but one is the exemplar of all. Unless a greater interest is taken by every individual member and especially by the officers whom the members elect, in these matters which so directly interest and affect them they will very shortly be overtaken by a calamity not apparently undeserved.

At the time of the making of the present medical law in this state the medical profession and the other associated professions following them supinely agreed to provide funds for the administration of the law. The Legislature

graciously agreed to this principle because it would cost the State nothing for, in this manner, protecting to a degree the public health, and provided in this law, that all moneys received should be paid into the State Treasury and that the Legislature should annually appropriate an amount sufficient to administer the law. Through these beneficent provisions the professions have paid into the State Treasury each year for the last ten, excluding this appropriated back to them for the administration of the law, and this year will pay in a hundred thousand dollars more than in reappropriated. And still the legislature would not report a bill increasing the salary of the Secretary of the State Board of Medical Examiners, a salary fixed fourteen years ago, in the sum of five hundred dollars in order to bring the salary for this office to correspond with that of the Secretary of the Dental Board. Is it not time for the professions to insist that they shall not be taxed illegally and indirectly to pay money into the Treasury of the State that should by right go to the bureaus having in charge the administration of the law as was the plain intent of the statute?

Some attempt must be made to increase the efficiency of the prosecution of offenses against the Public Health law. Outside of murder, your Chairman believes, no crime against the common weal of the State goes so often unwhipped of justice as violation of this law. Why pay money to administer a law for the protection of the public health if quackery is not alone unpunished but permitted to maim and ignorantly kill, but in addition to fatten, become enriched, wax fat and kick? The remedy lies in an amended and proper law, properly and rigidly enforced, and in public education in health matters, a task which is the duty of the profession and besides, one which is very sadly neglected.

The amount of money spent by the Society in prosecuting the work of its Committee on Legislation is woefully inadequate; it has never, so far as your Chairman can recall, exceeded seven cents per capita of membership. The chiropractors alone spend from twenty to fifty thousand a year to maintain their legislative lobby; there are less than a thousand of them and the State Society had nearly nine thousand. A contribution from each chiropractor of twenty to fifty dollars a year and from each member of the So-

ciety, seven cents! From the sublime to the ridiculous!

JAMES J. ROONEY, (signed)
Chairman.

Your Committee recommends:—

1. That a Legislative Bureau be established permanently at Albany for the purpose set forth in the report of this Committee for the year 1919.

2. That action be taken by the House of Delegates upon the perversion of the statute by the Legislature in not reappropriating moneys received from the professions, to the department of education for the purpose of administering the law.

3. That a committee be appointed by the House of Delegates to confer with similar committees to be appointed by other professional, educational and law bodies for the purpose of amending the medical practice act in order to make its provisions effective and to modify its requirements as may be deemed necessary for the practice of medicine both general and special.

4. That a committee be appointed by the House of Delegates to devise a plan for conducting public health education by County Societies for the purpose of creating a public demand for proper health law and its enforcement.

5. That a Committee be appointed by the House of Delegates for the purpose of prosecuting a real state wide investigation—not the closed chamber five hour stereotyped dictated sort—on the subject of narcotic addiction disease, and that their report embody suggested changes in the present law both Federal and State that they deem necessary for (a) proper medical care, and (b) police regulation. Furthermore that this committee meet with such other bodies, magisterial, charitable, health and educational in the hope that this most important question may be clarified and, if possible, an unanimity of opinion arrived at which will have imperative effect upon legislatures both national and state.

6. That the House of Delegates determine whether at Legislative Hearing the presentation of the argument for the Society shall be made by and at the direction of the Chairman of your Committee on Legislation or whether any County Society may, irrespective of the opinion of your Chairman, present its view in opposition thereto.

7. That the use of personal influence to in any way defeat the legislative program of this

Society subject any member so offending to censure of the Society.

JAMES F. ROONEY,
JAMES N. VANDER VEER,
HENRY S. STARK,
Committee on Legislation.

ROCK ISLAND COUNTY HAS THE PROPER SYSTEM—LEGISLATIVE FOLLOW-UP LETTER THAT BRINGS RESULTS

Last month we published data showing how the Maternity Bills before the legislature were defeated in committee. We publish the following for educational purposes:

Silvis, Illinois, May 8, 1921.

To the Hon. M. R. Carlson, Senator,
Springfield, Illinois.

My Dear Senator Carlson:

Speaking for the Rock Island County Medical Society on the subject of Senate Bills 405 and 417, which I believe are now before your Committee.

The members of the society have no wish to dictate your action in this or other matters. We are, however, in possession of first hand information on the subject of maternity management and do get a perspective in viewing its details which is not the privilege of men in other lines of work. For that reason we ask that you grant some consideration to our judgment of certain phases of these bills.

S. B. 417 applies to this county. S. B. 405 makes similar proposals for some other communities. I therefore discuss 417 but remembering that, in the main, comments on one apply to the other. This bill is free from some of the minor objections incorporated in earlier proposed legislation but retains all of the fundamental or constitutional faults.

By Title: It proposes the practice of medicine by the state. All of the "non-technical" instruction in these matters can be outlined in a very small pamphlet such as has been distributed by the State Health Department for years. ALL of the remainder IS the practice of medicine. Whenever symptoms arise the doctor observes, correlates, interprets and treats. If the practice of medicine were a science alone, then the state could do it in a way, but medical practice is an art as well as a science, and the state is no arti-

san. If there are reasons why the state should supply medical care which is purchasable, then there are the same reasons why the state should buy groceries for its citizens. We deny that the need exists and cite that American women get better care through maternity than any other women on earth. That citation can be proven. In proposing to vote a tax benefit to private citizens who are not paupers the bill is socialistic in tendency and would be socialism in fact, were it ever enacted. Public tax for private benefit is a proposal unheard of in all our history and traditions until the present period of rampant Red propaganda. Bismarck used state medicine avowedly to "bind the working classes to the state," and it did bind them. Its value for that purpose is proven by this: in 1916 when Germany drew up peace proposals for the (about to be?) defeated allies, her proposals allowed time for adjustment in every instance but one. One proposal was that each of the allied countries must adopt immediately a system of "state medicine." There was to be no delay on that one; it was urgent. Let the man who doubts that look it up. It is true. This bill comes to us from Germany.

By Section: Being fundamentally wrong, the details of its application cannot make it right. Nothing of interest occurs until near the end: Sec. 4, line 4, "instruction" is desirable and has been ably given in the past by the already constituted Department of Registration and Education.

Sec. 5, in toto, is faulty in that it confuses a clean-cut issue. It confuses preventive medicine with curative medicine. The line between should be distinctly drawn. Preventive medicine is, most wholesomely, a state matter: it protects one citizen against his neighbor's contagion, and it carries proper police power, that one bad man may not endanger his community. Curative medicine and obstetrics can never be other than a private, family matter. The one is a matter of public necessity, the other one for private choice and carrying no public menace. That line is basic, for the home is the unit of the state, in a republic or a democracy.

I trust I have not been unpardonably boresome. I do thank you much for past courtesies, and I remain, with very kindest personal regards,

Yours sincerely,

WM. D. CHAPMAN,
Med.-Legal and Legln., R. I. County
Medical Society.

DOCTORS SHOULD BE FREE TO PRE- SCRIBE ALCOHOL SHOULD THEY SO DESIRE

RESENT HAVING PEOPLE DOCTORED BY CONGRESS
OR HAVING THEIR ILLS TREATED BY
THE LEGISLATURE

Country wide referendum among physicians shows 76 per cent. value right granted them by Volstead Act.

To a proposition duly made and presented to the physicians of the United States that they transfer to some government agency the privilege granted them by the Volstead Act to prescribe alcohol when indicated, nearly 25,000 representatives of the profession answer "No." A referendum vote taken on this question by *The Medical Pocket Quarterly* (Jersey City, N. J.) to establish the sentiment of the profession on the question showed 20,176 votes against the surrender of this privilege to the Government, and 1,935 in favor of surrender, while 1,134 failed to vote. The total vote cast is claimed by *The Quarterly* to be "the largest, most nation-wide, and most representative vote ever cast by the physicians of this country on any single subject," and shows a significant solidarity of sentiment. We read:

"Physicians of every State in the Union voted in this referendum, including practitioners in all the States of the South and West which were running on a prohibition basis before the enactment of the Eighteenth Amendment. Country as well as city physicians participated in equal amount, the vote as a whole epitomizing clearly the unwillingness of the medical profession to relinquish the prerogative they enjoy, even if they all do not exercise it, for personal or other reasons.

"In analyzing the votes cast, it is proper to state that all who voted against the surrender to the Government of the right to write alcohol prescriptions, when in their judgment an alcoholic stimulant would be beneficial to their patient, did not vote 'No' because of any predisposition in favor of alcohol as a useful medicine.

"Still others believed that even if they personally did not agree with their fellow practitioners who consider alcohol a helpful and valuable medical agent in the treatment of certain diseases, these practitioners should not be deprived of the right to prescribe it whenever they deemed it proper. Such an inhibition, they held, would be gratuitous interference with the practice of their fellow practitioners and the means they employ to achieve the cure of their patient or the mitigation of their suffering, if incurable. Medical thought in the use of remedial agents not being standardized, and physicians being of different minds concerning the merits of the drugs they prescribe, no physician, they say, has an inherent right to impose his personal preferences upon others whose experiences persuade them to think differently.

"On the question of compulsory health insurance,

submitted to the physicians of the nation, the vote cast was still more overwhelmingly against the introduction to this country of this form of European socialism. Here the cities where the industrial classes live and which should be most vitally affected were supposed to be the main opposition to this type of legislation, but the vote shows the country as deeply opposed to it.

"Compulsory health insurance touches a peculiarly tender spot in the hide of a physician—it strikes a body blow at the heart of his pocketbook. In voting on this question, a number of physicians stated that if compulsory health insurance became a law, they would forthwith quit the practice of medicine. Others added they would never serve on any insurance panel, even though assigned to it by State authorities, on which they would be obliged to give their services, demanded by advocates of this legislation. On this question the medical profession, as shown by its vote and the statements accompanying it, is prepared to fight to the death, without quarter or compromise."

ARE OSTEOPATHS SERIOUS OF FACETIOUS?

THE ILLINOIS OSTEOPATHIC ASSOCIATION

SUITE 1306, 27 EAST MONROE STREET, CHICAGO

May 17, 1921.

Secretary,
Illinois Medical Society,
Springfield, Ill.

Dear Doctor:

The following resolution was unanimously adopted by the Illinois Osteopathic Association, May 14, 1921, at Springfield. I am sending you copy for your information:

"We recommend that the thanks of this association be extended to the Sangamon County Medical Society for the kindly fraternal public spirit which was shown us by its action in objecting to our use of St. John's Hospital for clinics. Such action on the part of the medical fraternity is a priceless asset to us, as it always serves to further enlighten our friends and the public concerning the historic and friendly attitude of the old school of medicine toward any new school of practice."

THE ILLINOIS OSTEOPATHIC ASSOCIATION,
BY WALTER E. ELFRINK,
Secretary-Treasurer.

THE NATURE OF THE BUSINESS IN WHICH CHIROPRACTORS ARE ENGAGED

WILLIAM H. WACEK
MADISON, WIS.

What is chiropractic? This question was put to the president of the largest chiropractic school in the country and his reply was that he did not know and later added that chiropractic is a commercial enterprise, existing solely for the purpose

of making money for those engaged in chiropractic practice. It is interesting to inquire into the nature of the business in which chiropractors are engaged.

Chiropractors are in the business of exploiting sick people for financial gain. It matters not what the nature of the sickness may be, a chiropractor will guarantee to cure anyone, providing that person will stay long enough with the chiropractor and has the money with which to pay for his services. The least concern of the chiropractor is the nature of the disease with which his patient is suffering, and according to chiropractic claims gonorrhea, syphilis, tuberculosis and leprosy will yield just as readily to chiropractic treatment as the more common complaints such as colds and headaches. But the chiropractor does not stop there as to the efficacy of chiropractic in the treatment of disease. If the country is being swept by a pandemic of influenza out come chiropractors with the double statement that chiropractic will not only cure influenza but prevent it as well. Chiropractic treatments are even advised as prophylactics against venereal disease. Even with these possibilities of usefulness chiropractic can also be successfully used for any disease that happens to be featured in the day's news. In short a chiropractor will guarantee to cure anything so long as there is a financial reward in the transaction.

Chiropractic would be short lived were it not so extensively advertised. If a chiropractor were to depend for new patients on the recommendation of people whom he has cured he would not be in business very long. A chiropractor gets people to come to him through his advertising. Every form of advertising is utilized by a chiropractor. Billboards, newspaper advertisements, motion pictures are all used by chiropractors. The advertising is so written that it sells chiropractic regardless of its merit. To the extensive advertising carried on by the chiropractor may be added the distribution of chiropractic literature. According to the figures of one chiropractic publishing company every person in the United States reads something of chiropractic every week. The office of every chiropractor, in so far as propaganda literature is concerned, make the efforts of the wildest radicals look rather emaciated.

It would not be unreasonable to suppose that with the large claims made for the efficacy of chiropractic in the treatment of disease that chiropractors would possess some superior knowledge of the healing art. It is significant to note that chiropractors have no more knowledge of the healing art than has your iceman or your janitor. Chiropractors in the long run can be no better than the chiropractic schools that turn them out. What of chiropractic schools?

Chiropractic schools as they exist today in America are out and out commercial enterprises. Profits receive far more consideration from the officers in charge of chiropractic schools than the course of instruction. Practically all the chiropractic schools of the country have their faculties made up of business men who have no special knowledge of the healing art. What kind of instruction can such men impart.

With profits being the first consideration of chiropractic schools the character of the instruction must of necessity be of the cheapest kind. Chiropractic schools pretend to teach the students of their schools the basic subjects such as anatomy, physiology, chemistry, etc. The instruction is not carried out in connection with the laboratory but almost wholly by the lecture method. It is not therefore surprising that the average chiropractor knows no more of anatomy, physiology, chemistry, etc., than does the average secondary school graduate. What is the character of the people that receive chiropractic instruction?

Chiropractic schools have only two requirements for entrance: 1. Spot cash at time of enrollment, \$350, and, 2. ability to read and write. With such requirements for entrance in operation every janitor and ditch digger can enter, and that indeed is the case. Chiropractic is attracting into its ranks men who have failed at most everything. Should that type of people undertake to treat sick people? Apparently in some instances the American public wants that kind of treatment.

It is no credit to American business that it permits the operation of such unconscionable people as chiropractors. To some however, so it appears, the mere dollar has more attraction than public health and public well being.

740 Langdon Street.

P. T. BARNUM WAS RIGHT WHEN HE
STATED THAT THE AMERICAN PUBLIC
LIKES TO BE HUMBUGGED

DOCTORS ARE SPENDING TIME, MONEY AND ENERGY
FIGHTING THE FORCES OF DISORDER WHICH SEEK TO
DESTROY THE ECONOMIC INDEPENDENCE, DOMESTIC
PRIVACY, SELF-RELIANCE AND SELF-RESPECT OF OUR
PEOPLE THROUGH MISCALLED "WELFARE LEGISLATION"
PREPARED OSTENSIBLY FOR THE BETTERMENT OF
MAN, BUT REALLY DESIGNED FOR HIS CONTROL.

The following excerpt* from a speech of Dr. J. J. A. O'Reilly of Brooklyn, New York, before the Wayne County (Detroit) Medical Society, May 11, 1921, is published for educational purposes to help head off vicious uplift propaganda.

In this day and hour the men and women of Medicine must spend their time and money and energy in maintaining the integrity of the medical salient of the American line of defense against the Forces of Disorder which seek to destroy the economic independence, domestic privacy, self-reliance and self-respect of the people of this Nation through miscalled "Welfare" legislation prepared ostensibly for the betterment of man but really designed for his control.

WHO THE PROPAGANDISTS ARE

This pestilential paternalism is sponsored by and through an *infernal triangle*, made up of the false doctrinaire, the professional philanthropist and the political patronagist, representing groups which are organized under the banner of "Uplift," parading under the cloak of the "Brotherhood of Man" and chanting a hymn of "Welfare" to mask the real purpose of the worshippers at the shrine of something else than Americanism, who have flowed to these shores from the sewers of Europe during the past twenty years and who will not permit themselves to become in sympathy with the traditions and ideals of this country for which the men and women of all generations have given their lives.

These organizations weave into their titles the words "American," "Labor," "Trade Union," "Welfare" and the like, believing, with P. T. Barnum, that the American public likes to be humbugged. Well-meaning American citizens lend their good American names and contribute their good American dollars to these organizations, unmindful of the old adage "Tell me your company and I'll tell you what you are;" it is shocking to see the names of men and women prominent in church and state and society,—aye, a president of these United States and a president of the American Medical Association, blended with the names of university, magazine, parlor and gutter apostles of unrest; with lecturers in the Rand School for Socialism; with those who seek to justify the sinking of the "Lusitania;" with the writer of the infamous "Dear Gene" letter to Eugene V. Debs, the official designee of Lenine and Trotzky as "The Proletarian Dictator of the United States when the Revolution shall have been completed;" with the

editors and owners of socialistic and Negro-inflaming magazines; with men and women who use the mantle of charity to cover the distribution of radical literature in settlement houses; with men and women in sympathy with the doctrines of the Third Internationale and out of sympathy with the traditions and institutions of America.

One of these organizations, the American (?) Association for Labor Legislation, is the propagandist in chief of this vicious Public Health Legislation; it is a part of the Labor International with headquarters at Basle, Switzerland; it is not American and it does not represent labor, but it is an "Arrogant Association for Lucrative Legislation" and it is affiliated with such terribly American (?) organizations as The Women's Trade Union League, whose leader refused to carry an American flag in a Chicago parade because they would not let her carry the red one on her other shoulder; with the Birth Control Leagues, made up largely of women whose sympathy with American motherhood is predicated upon the proud possession of a Pekingese pup; with the New York Federation of Labor, whose representative, at the 1920 Hearing on Compulsory Health Insurance, at Albany, N. Y., voiced this choice concept of the American square deal: "The Doctors don't want this Bill, eh? What do we care? *It is our will;*" with the New York League of Women Voters whose local chapters in my county repudiated the parent organization's endorsement of Compulsory Health Insurance and helped us defeat a lot of candidates for the legislature on a Compulsory Health Insurance issue; with the Consumers' League and other impressively entitled organizations—all with interlocking Directorates and all dominated by men and women whose affiliations with the Rand school and pre-war pacifists, wartime obstructionists and post-war "Agencies of Discontent," warns us that we must hold them to one standard of measurement,—that the more 100% Americans, claimed by any organization, the less excuse exists for tolerating any Anti-Americans or Americans—but.

It is just such organizations that we must be prepared to meet and beat. They are well-financed, nominally by a "dues paying membership," but actually by the moneyed foundations whose purpose is control and the exploitation of legislation which will yield lucrative berths for the proteges and graduates of their schools of sociology, philanthropy and psychology; the New York Mental Defective Commission Law and the extravagant and top-heavy institution at Thealls, N. Y., are typical of this process of using the State for a "good thing."

It is just such organizations and their oleaginous executive secretaries who have been able, in the past, to seduce some of our medical leaders so that they lend themselves to their plans by direct treachery or by "boring from within" through expediency and compromise, which are the curse of medical society politics; or by the subornation of medical journals

of standing, under their control or subject to their coercion; or by articles contributed to such organs as "Modern Medicine," owned by the Modern Hospital Association and edited by the American Association for Labor Legislation's campaigners, lay and medical.

I could spend hours telling you my personal experiences of their active dishonesty and trickery in the great campaign in the State of New York, from coming in late at a debate to gain a petty advantage, as at Schenectady, N. Y., and Kalamazoo, Mich., to the deliberate packing of a conference or the prostitution of church pulpits and church organizations as propaganda centers; or using the Commission on the Church and Social Service of the Federal Council of the Churches of Christ in America for the purpose of calling a Conference in the name of religion and packing it in the interests of the proponents of Compulsory Health Insurance; or the attempted elimination, from the present New York Medical Practice Act of (Sec. 170-d) the only legal bar to unbridled abortionism and contraceptionism, to purchase the support of the Birth Control League, with knowledge of the fact that the New York State Medical Society, by its endorsement of that Medical Practice (Re-Registration) Act would have been morally responsible for the betrayal of medicine if we had not succeeded in beating it; or the exploitation of a Drugless Therapy Bill (N. Y. Assembly Bill 582) which would have legalized a cult for treating everything, from acute appendicitis to chronic arteriosclerosis,—from atrophy of the sense of proportion to hypertrophy of the "cosmic urge," by the simple method of making crescentic strokes with the right fore-finger under the ear of a patient relaxed upon the table; here it is, Sec. 1 Article 1:

"The practice of Drugless Therapy, which is a system, method or science of healing disease without the use of drugs or medicines of any kind, using Massotherapy, Mechanotherapy, Electrotherapy, Hydrotherapy, Naturopathy, Chiropractic, Napro-
pathy, Neuropathy, Dietetics (Food Science), suggestive Therapeutics, Magnetic Healing, Vibrotherapy, Zonotherapy, or any other drugless methods that hereafter become known or in use."

WHAT THE PROPAGANDA IS

I have told you whom you have to fight, as Knights of the Caduceus: As briefly as possible I will tell you *WHAT* you have to fight; then I will tell you *HOW* we fought in New York and New Jersey and give you some detail of the Professional Guild Idea which made the power of medical citizenship an institution of force and dignity; a wall of defense for the agencies of healing and the people whom they love and serve; a menace to party solidarity when public health is made the pawn of party politics; a channel for the education of the people to a realization of the fact that welfare, which pauperizes, is profligacy, and that an "Ounce of prevention is worth a pound of regret."

JAR. NO. — "SPECIMEN BRAIN OF MICROCEPHALUS."

(From Dr. Aristides Pillés "Blue Monday Anthology")

Well, if there
Aint my old college chum!
Hello! Doc., Howdy? How's biz—
Beg pardon, old scout, I mean practice?
Glad to hear it, Doc., glad to hear it—
Sorry for the sick folks,
But always glad to know that
The profession is prosperous and happy.
You see, all the members of Congress
And of the various State Legislatures,
Are constantly worrying about the welfare
Of the dear medical profession.
We regard you as public benefactors
And feel that—Oh, sure, I'm
A Congressman, and I once was a
Member of the New York Legislature, too!
Why, I supposed you knew that!
My head? Say, Doc.,
What kind of a head d'ye think
A Congressman ought to have, anyhow,
Why, man! I'm a born statesman!
I admit it, so that settles that question.
Humph! These birds with the
Seven and three-quarters hats give
Me the woolies. Why, I know some
O'them cuckoos, that wouldn't know
How to kiss a bill through
If the other gang was chloroformed and hog-tied.
Big hats are all right, Doc.,
As far as they go,
But it's brains that count with
A statesman like me.

Well, as I

Was saying, we statesmen are
Mighty fond of you Docs.
And why shouldn't we be?
Why, it was one of you guys
Who brought me into the world!
The whole country should be grateful to
Fellows like you, who devote
Your lives to science and relieving suffering,
And curing up sick folks,
Preventing epidemics, or stamping them out,
To say nothing of what
You have done for the country
By saving for it great statesmen,
Like some I could mention.

Yep, but you

Docs. all work too hard and we're
Going to help you out.
Sure, we're going to have
State Medicine and Health Centers,
And Compulsory Health Insurance,
Public Clinics for sociable diseases,
And public midwives, and everything we
Can put over or get by with,

To help you Docs. out, so
You won't have to work so hard, and
By and by you won't have to
Work any more—not a-tall.

Sure, and we
Are going to raise the
Standard of medicine so
High that nobody but
Osteopaths, and Chiros, and Christian Scientists,
And patent medicine men
Ever can reach it.
And we are going to fix things
So that the profession won't
Have so much bother running the
Works. We are going to have
Just one man to attend to
Everything for you, and he'll be
In the Cabinet at Washington.
Yes, sirree, Doc. we're going to
Relieve you medical guys of
All the labor and responsibility
We can, for we love you
And highly appreciate all you folks
Have done for the
World, and especially for us great statesmen.

Why, Doc.,
You medical men haven't any kick coming.
As it is. See what our new
President did! Didn't he take a
Doctor that nobody ever heard of before
And make a Brigadier General of him?
And did we Congressmen kick much?
Of course, we didn't.
When it comes down to
Doing things for the profession,
We're there with the goods, and
To hell with army rules and regulations!
You can bet your life, we'll
Kiss through anything you Docs. want,
Any old time, but
If you don't make Doc. O'Reilly
Shut up, he'll spill the beans
For you medical guys. Just as
I told you, Doc., we'll look after you
Medical men, if you'll just
Be patient. As I said
These guys with the big hats
Make me tired all over,
So, you'd better hang the
Indian sign on that fresh O'Reilly person.

Of course, you
Can trust us statesmen. We're the lads
That's got the brains. Didn't we
Fix it so you fellows have to have
A license to give a man a hypo?
Didn't we put over the Eighteenth
Amendment, so you guys can run
Buffets and rathskellers? Didn't we Doc.?
Come, now didn't we? If we

Didn't, who the hell did? Hey?
You doctor chaps owe us a lot, Doc.
And don't you forget it. And
When we get things fixed so
That you don't have to work any more,
You'll begin to see how we
Statesmen love and appreciate you.
You sure will—if you don't now.

So you can
Readily see that a guy that wants
To do something for you doctors, has
Gotta have some head for it, and
You know I've got some.
Why, ever since I was born,
People have told my folks that
I was sure to be a statesman,
My head was built just right,
For service to my fellow-citizens.
You bet your life!
And you fellows had better put
A muzzle on O'Reilly.
That birdie talks too much.

Well, Doc.,
I'm sorry you must be going.
I was a bit lonesome. Not
That I don't like it here,
For I do, I feel quite at home
Here. I make speeches to my
Friends on the shelves,
Most every day. They're a
Bunch of "live ones," all right.
And remind me of some of the
Fine audiences we statesmen talk to
In the Legislature or in Congress.
I tell you, Doc., it's a great
Satisfaction to have a head for
Statesmanship. And I'm going
To do all I can for you
Medical guys, at all times.
But, for God's sake
Muzzle that damned O'Reilly.
He-makes-me-sea-sick.

G. FRANK LYDSTON, M. D.

AS WELL CONSIDER AS EXPERTS EVERY- ONE WHO IS IN THE HABIT OF EATING THREE MEALS A DAY

THE SHEPPARD-TOWNER BILL

To the Editor—I wish very much that the medical profession would take up the matter of the Sheppard-Towner bill before it is too late! I believe intensely in the care of childbirth, but deplore this particular bill. Indeed, I feel peculiarly strongly the great importance of prenatal care, as the five-year experiment in prenatal care made by the Women's Municipal League of Boston from 1909 to 1914 was carried on by me, and on this experiment was founded the Prenatal Clinic of the Boston Lying-In Hospital, the work of the New York Milk Committee—which has

now been taken over by the Maternity Centers—Dr. Ballantyne's work in Edinburgh, as he himself wrote me, and I believe also Dr. Truby King's in New Zealand and many others—scarcely a week passes that I am not in receipt of requests for information from some one on the subject.

For corroboration of my right to speak with some knowledge I would refer you to an article published in *THE JOURNAL*, Jan. 30, 1915, by Dr. Franklin S. Newell, on an experiment which I made on the blood pressure of pregnancy, and especially to the first page of Dr. J. Whitridge Williams' recent article on syphilis as a cause of infant mortality, which was published in the *Bulletin of the Johns Hopkins Hospital*, a reprint of which he recently sent me.

I mention these things merely to show you how strongly I believe in prenatal care and that I am somewhat qualified to speak on the subject.

The Sheppard-Towner bill seems to me very objectionable because the care of pregnancy, childbirth and the puerperium is clearly a medical matter, and the effort which was made at the hearing before the House committee to prove that the social and economic matters affecting pregnancy were of more importance than the medical is sheer nonsense. It reminds one of the old conundrum, "If you call a dog's tail his leg, how many legs will he have?" He will have four, because calling a tail a leg does not make it so! The subordination of the medical care of maternity to the social care is on a par with putting the medical staff of a hospital under the Department of Social Service.

The statement that "all the women in the country" endorse this bill is not true. The thousands of women belonging to the Women's Municipal League of Boston have given me their endorsement in this matter. Indeed, every woman whom I have seen who has understood the bill is opposed to it. The hearings have been carried on as if the fact that a woman had borne a child, or, indeed, just happened to be a woman, entitled her *per se* to medical knowledge on the subject of the proper care of childbirth. As well consider as experts on digestion every one who is in the habit of eating three meals a day.

The bill will do good. Almost any bill bearing on this subject, administered in almost any way, is sure to do some good, because the conditions are now so very bad that almost any plan can hardly fail to improve them. But must we stop at an inferior thing? Must we save a small percentage only of the women and babies who might be saved at the expense of the far greater number whom this bill will force to wait, probably for many years, to get the help they need—because a bill that will improve matters at all will make it difficult to pass any better one within any reasonable time. In order to do the 100 per cent. of good which ought to be accomplished, not only to save the lives of these women and children but, what is far more important, to make them healthy, vigorous members of the community, the very best medical knowledge is required; and if the Public Health Service has not at present the right type of man to administer this bill, he should be found and under that service it

should be administered, not under a lay official head of a bureau in the Department of Labor.

MRS. WILLIAM LOWELL PUTNAM, Boston.

MECHANOTHERAPY BILL DEFEATED

ILLINOIS STATE MEDICAL SOCIETY

Springfield, Ill., May 19, 1921.

To All Councillors:

We have decisively defeated the Mechanotherapy bill in the Senate, known as S. B. 277—the vote stood ten in favor of the bill and nineteen against it, and the following are the Senators, their politics, their residence, and the way they voted:

FOR

Austin, Republican, Oak Park, Ill.
Bailey, Republican, Danville, Ill.
Barbour, Republican, Chicago, Ill.
Cornwell, Republican, Chicago, Ill.
Dailey, Republican, Peoria, Ill.
Dunlap, Republican, Savoy, Ill.
Kessinger, Republican, Aurora, Ill.
MacMurray, Republican, Chicago, Ill.
Pervier, Republican, Sheffield, Ill.
Turnbaugh, Republican, Mt. Carroll, Ill.

AGAINST

Boehm, Democrat, Chicago, Ill.
Buck, Republican, Monmouth, Ill.
Cutbertson, Republican, Bunker Hill, Ill.
Forrester, Republican, Taylorville, Ill.
Glaekin, Democrat, Chicago, Ill.
Gray, Republican, Coatsburg, Ill.
Herlihy, Democrat, Chicago, Ill.
Hicks, Republican, Rockford, Ill.
Meents, Republican, Asbkum, Ill.
Mills, Republican, Virginia, Ill.
Roos, Republican, Forest Park, Ill.
Sadler, Republican, Chicago, Ill.
N. E. Smith, Republican, Albion, Ill.
O. W. Smith, Republican, Decatur, Ill.
Telford, Republican, Salem, Ill.
Wright, Republican, DeKalb, Ill.
Wood, Republican, Keens, Ill.
Wheeler, Republican, Springfield, Ill.

Now, Doctor, it is imperative, especially to immediately get word to your Senator your approval or disapproval of his action. Get it to him by telephone, telegraph, mail, personal interview, or any other of the fifty-seven varieties.

If there was ever a time that we can drive home a good point it is now. Let these men know that the physicians are awake politically. Get word to the livest men that are the closest to the Senators in your District, and to those that voted against the bill let them feel satisfied that we appreciated the stand which they took. I do not believe it would be good judgment to retaliate against the other men because some of them are really our friends, and no doubt, they were won over by the personality and the extremely high class campaign that Mr. Jewell put on for the last few weeks at Springfield, personally entertaining and spending a great deal of time with each Senator, and it would be good politics to write and tell any particular Senator who voted in favor of the bill that it is too bad that the Legislative Committee of the Illinois Medical Society had been so lax in their legislative work as not to inform them as to the danger of

this rather innocent looking measure, and that you believe those proponents of the bill, as indicated by their vote, are men who believe in keeping the high standard of education relative to those who desire to treat human ailments.

Let them know that it is not a fight of the Doctors, which is evidenced by the fact that we in no manner attempt to curtail or suggest any method of treatment for any practitioner, provided that he meets the requirements that are now set forth by the present law, which is considered a good one, and which is being copied by other States.

Whatever may be your mode of attack the one paramount thing is to do it IMMEDIATELY and advise me as to what your action has been, and advise the Doctors to whom you send your message to get to me a letter indicating their interview with the respective Senators.

The other vicious measures that are before the Legislature are bound to come up for a vote within the next week or ten days, and if we can save one or two of these votes by calling attention to the fact that we are watching the Legislature, and this information must come from the individuals closest to the legislators. Certainly no politician would be willing to overlook a political power of a well organized Medical Profession in every community as compared with the very few that champion the cause of these "back door routes" to the practice of medicine.

DR. J. R. NEAL,
Chairman Legislative Committee.

REPORT ON THE ILLINOIS SOCIAL HYGIENE LEAGUE

REPORT OF A COMMITTEE APPOINTED IN ACCORDANCE
WITH A RESOLUTION PASSED AT THE ANNUAL
MEETING OF THE ILLINOIS STATE MEDICAL
SOCIETY AT ROCKFORD, MAY, 1920, TO
INVESTIGATE THE ILLINOIS SOCIAL
HYGIENE LEAGUE

Committee: Henry F. Lewis, chairman; John R. Harger, Jacob C. Krafft.

Your Committee, appointed by the President in accordance with the foregoing resolution and instructed to investigate the Illinois Social Hygiene League, respectfully submits the following report:

The Committee visited, on Feb. 2, 1921, the dispensary and headquarters of the League at 118 Grand Avenue, Chicago; talked with the Resident Assistant, Mr. Brennan; made searching inquiries which were courteously answered; received various pamphlets, etc., relating to the propaganda, purposes and methods of the League, and inspected the premises.

From what we learned we believe that the League runs an efficient dispensary for diagnosis and treatment of venereal diseases and syphilis in men and women.

Mr. Robert H. Gault, of the faculty of Northwestern University, is President of the League, Mr. Bernard C. Roloff is Executive Secretary and Superintendent, Dr. Budd C. Corbus is Chief of Staff. The other mem-

bers of the Staff were stated to the Committee to be: Doctors Vincent J. O'Connor (Dr. Corbus' partner), Erwin P. Zeisler, Frederick Christopher, R. B. Cobb, H. B. Frost, J. B. Sonnenschein, M. S. Oliver, J. P. O'Neill, Gail Chandler, Matilda Lichner, Pauline Kapsa, Pearl M. Stetler and Clara G. Gottshalk.

We were told persons receiving over \$30 per week if single and \$40 if married, are not treated but are referred to the above staff members and to selected members of the Chicago Urological Society, in rotation, at their offices. Three or four names from the above list are given to such persons applying at the dispensary. Drs. Corbus and Zeisler would not receive anybody from the clinic. Dr. Stetler operated upon women sent from the dispensary to the Mary Thompson Hospital.

The League advertised, for a long time, each Saturday in the *Chicago Evening Post*, in the "Charity Section," along with the Presbyterian Hospital, the Fresh Air Tuberculosis Hospital and other charitable institutions.

The resources of the League were said to be:

The Illinois State Board and the U. S. P. H. S. send some salvarsan; the League uses the latter's report blanks and the posters of the Chicago Health Department, the latter in lavatories, etc.; contributions are solicited from the wealthy. Nobody is turned away for lack of money but all are expected to pay one dollar per treatment.

Investigations of patients are made by the League's own Social Service; cases are reported to the City Health Department by case number, and by name and address when they fail to return for treatment within the specified time, many give fictitious addresses.

Educationally:

Lectures are given to patients by the staff; pamphlets, etc., from the Chicago Health Department, Illinois State Health Department and the U. S. P. H. S. are given out.

The dispensary is listed in the bulletins of the City Health Department which are posted in comfort stations, etc. There is no medical teaching.

The Dispensary building has three stories, is old, but in good repair and is kept clean inside and out. A cash register is a prominent fixture in the office.

The object of the League, as stated in its letter-heads, etc.:

"To defend the community by Educational, Social, Medical and Legislative means against the menace of venereal diseases. The League is affiliated with the American Social Hygiene Association and approved by Departments of Public Health."

A list of names of the Directors (printed on the letter heads) contains those of the following Doctors.

William L. Baum, B. C. Corbus, Gustav Kolischer, William Hessert, and Rachelle S. Yarros.

The League also contains a venereal clinic at the House of Correction, under charge of Dr. Ben Reitman, who is paid by the League. U. S. P. H. S. report blanks are used here.

On invitation of the Committee, Dr. Corbus and Mr. Roloff met us at the rooms of the Chicago Medical Society, Feb. 8, 1921.

These gentlemen were questioned as to the aims and activities of the League. They both defended it, stating that they had for some time expected an investigation of the League by the Chicago or the Illinois State Medical Society. On being asked why the League was considered necessary when there were so many other dispensaries and hospitals, teaching and otherwise, in Chicago, Dr. Corbus said that it was notorious that all venereal clinics in medical schools and hospitals in Chicago were inefficient. Asked why the clinicians at the League were efficient, he replied, "Because we pay them."

He also said that he personally had never treated privately any patients referred to him from the dispensary; that he had no need for such financial aid and that, if he was expelled from the Illinois State Medical Society and the Chicago Medical Society, "he could still live at ease for the rest of his life, even if he ceased practice altogether."

Asked whether he did not think that such a dispensary should rather be run by a college so that medical instruction would result from its activities, he replied that he had "tried to give it to the University of Illinois" but that "he wanted to be the head of it," and the University had declined it.

Mr. Roloff, asked about the "Brisbanesque ads" in the *Post*, said that he had written them himself, not to attract patients but to secure contributions from the wealthy.

The Committee was given a pamphlet:

"Survey of the Hospitals and Dispensaries of Chicago, with Reference to the Facilities for the Diagnosis and Treatment of Venereal Diseases." (Bulletin No. 1). (Exhibit F). Both Dr. Corbus and Mr. Roloff said that this survey by Dr. Lincoln was the basis of the establishment of the League.

One of the members of the Committee met in conference, at their initiative, Drs. Lichner and Kapsa, on Feb. 21, 1921.

These ladies said that they had been dismissed from the staff of the League Dispensary by Dr. Corbus because, as he stated, the League was being investigated by the Illinois State Medical Society's Committee.

They stated that, previous to the last annual meeting of the State Society at Rockford, May, 1920, the League had been treating anybody who applied, but that, since then, the wage limit had been instituted. They said that Mr. Roloff received a salary of \$5,000 per annum; that Dr. Stone and Mr. Roloff give lectures and a preliminary talk for the purpose of advertising the League to different corporations at their plants, and that many of these corporations are contributors to the expenses of the League; also that each dispensary clinician is paid five dollars for each clinical period.

As a result of its investigations the Committee concludes:

The League runs an efficient dispensary; its staff is in the main competent, although the Committee does not think that members of other dispensary staffs in Chicago are any less competent and efficient because of not receiving five dollars for each three hour period of attendance.

The Committee also concludes: that there is no more crying need in Chicago for the League's dispensary than for most of the others in the city; that dispensaries which furnish free or cost price treatment and service to the poor should give a return to the profession and the community in the shape of clinical instruction to medical students, both graduate and undergraduate; that such dispensaries which are not under the control of recognized institutions for medical education, should only exist under the control or supervision of the organized profession, as represented by the local medical society, which might delegate to its affiliated special societies such control or supervision of special dispensaries; that this dispensary of the League and all independent dispensaries tend to pauperize the laity and the profession, and are steps toward Health Centers and toward State Medicine.

While believing that a proper and dignified propaganda whose object is to bring to the people knowledge of the danger of certain diseases and conditions and of places where the people can go to get relief is justifiable under proper safeguards, the members of the Committee believe this propaganda lies entirely within the domain of the Health Departments, in co-operation with the organized profession, or of the organized profession alone.

Your Committee recommends:

That the Illinois State Medical Society condemn the whole scheme of the Illinois Social Hygiene League, as at present constituted and administered.

The Council is referred to the following Exhibits, herewith presented:

Exhibit A: Treatment and history sheet of dispensary;

Exhibit B: Letterhead of the League;

Exhibits C and D: Advertisements in the Chicago Evening Post;

Exhibit E: Names and addresses of physicians "skilled in the treatment of Venereal Disease";

Exhibit F: Pamphlet by Dr. Mary C. Lincoln;

Exhibit G: Folder given out as propaganda to public.

Respectfully submitted;

HENRY F. LEWIS,

JOHN R. HARGER,

JACOB C. KRAFFT,

Committee.

HENRY F. LEWIS,

Chairman.

The above report was accepted by the Council of the Illinois State Medical Society and ordered published in the June issue of the *JOURNAL*.

Public Health

ILLINOIS BIRTH RATE COMPARES FAVORABLY WITH THAT FOR U. S.

The Fifth annual report of the Federal Bureau of the Census for birth statistics gives a birth rate of 22.3 per 1,000 of population for the United States Birth Registration Area. This figure is about two points lower than that for the Area in 1918, and indicates that birth registration in Illinois is more nearly complete than has been generally believed. Birth statistics on file in the offices of the State Department of Public Health show that Illinois had a birth rate of 18.4 per 1,000 population in 1920. The discrepancy of about four points between the State and Federal figures probably represents fairly well the degree of efficiency in birth reports for Illinois.

NEW SUPPLY OF DIET LISTS FOR INFANTS AND CHILDREN

The third edition of "Diet Lists for Infants and Children," a bulletin prepared by the State Department of Public Health has just come from the press. With the slight additions made the bulletin now represents the most complete circular of its kind ever issued by the Department.

The wide-spread popularity of the pamphlet is attributed to the fact that it contains detailed diet lists for the several age groups of children up to six years of age and tells how to prepare the foods. In addition there is a table showing the weights and heights of normal boys and girls up to six years of age. Physicians and nurses may obtain the bulletin in reasonable numbers, without cost, upon application to the State Department of Public Health.

RESULTS WITH ORGANOTHERAPY.

Strong, in his valuable article in the *Practical Medicine and Surgery*, December, 1920, gives his conclusions as follows:

1. Organotherapy is a rational treatment.
2. That a thorough physical examination is necessary before using them.
3. That their indiscriminate use be avoided, especially in maximum doses, because of untoward results.
4. That patients so treated should be frequently seen.
5. That we should understand their specific actions as well, if not better, than so-called galenic remedies.
6. Whereas all the glands have a hormonal action as a whole, the removal of one will break the continuity of their action, therefore, we should be as sure as possible before removing any one of them that its function is so impaired that if it remained it would be a menace to the health (this, by the way, is the real rub) and this is the problem of the surgeon. It is no longer a question with a competent surgeon as to how to operate, but what to do and especially what not to do.

THE ACTION OF PROSTATE EXTRACTS ON EXCISED GENITO-URINARY ORGANS.

It is well known that disturbances of the bladder function are frequently associated with hypertrophy and other diseases of the prostate gland. It is, therefore, interesting to inquire into whether there is any relationship between the prostate gland, on the one hand, and the tonicity as well as contractility of the bladder, on the other. The literature on the subject is very meagre.

The method was to suspend the fresh organ in Locke's solution in the regular kymograph technique and add the extracts of fresh prostate gland.—D. I. Macht and S. Matsumoto (Pharmacological Lab., Johns Hopkins University. *The Journal of Urology*, June, 1920.)

THE LAY CONCEPTION OF MODERN MEDICINE

An old lady—so runs the tale—was resenting the advice of a young physician on the care and rearing of children. "No sprig of a doctor just out of school can tell me anything about children," she averred. "I know all about 'em. I've had nine, and buried seven of 'em."

Society Proceedings

COOK COUNTY

CHICAGO MEDICAL SOCIETY

Regular Meeting, May 4, 1921

1. The Early Diagnosis of Carcinoma of the Upper Colon, Milton M. Portis and Sidney A. Portis.
2. Lessons in the Management of Diphtheria, Especially as Suggested by the Study of a Series of 147 Fatal Cases, George H. Weaver.
3. Cleft Palate and Harelip, The Surgical Treatment of, Wm. H. G. Logan.

Regular Meeting, May 11, 1921

1. General Anesthesia—Isabella Herb.
 2. Latest Achievements of the Art of Local Regional and Spinal Anesthesia—G. L. Labat, Paris, France.
- Discussion—M. L. Harris.

Regular Meeting, May 25, 1921

1. The Removal of Embedded Needles Under Fluoroscopic Control—R. B. Bettman.
- ABSTRACT—An operating fluoroscope to be used in broad daylight as an aid in the removal of foreign bodies. Technique of operating with intermittent screen control. Advantages of screen control.
2. The Differential Leukocyte Count in Diagnosis—C. H. Bunting, University of Wisconsin, Madison, Wis.
 3. Personality and Mental Factors in Relation to Criminology—Herman M. Adler.

EFFINGHAM COUNTY

Meeting of the Effingham County Medical Society, January 11, 1921, at the city hall in Effingham, at 1:30 p. m., Doctor E. A. Bing presiding. Minutes of previous meeting read and approved.

The secretary then passed some advertisements of the Samuel Insul et al. institute for the treatment of venereal diseases, in Chicago; these advertisements have been appearing in the *Chicago Tribune* and are evidently worded in such way as to give the impression that this treatment is largely a matter of charity when the reported facts indicate that a group of laymen have established the institute as a matter of profit and which deserves the condemnation of the entire profession.

The secretary then read a letter from Dr. J. C. Kraft, secretary of the Public Relations Committee of the Chicago Medical Society and asked the advice of this society as to what answer should be made to question No. 10; "Are you in favor of establishing Public Health Centers?" On motion of Dr. J. G. Allan, seconded by Dr. Doty, the society voted to table this communication.

The regular program was then taken up; a three reel moving picture demonstration on the Diagnosis and Treatment of Syphilis was presented by Dr. E. C. White of and for the State Department of Health; these films were very interesting and instructive and the society's thanks were extended to Dr. White for their presentation.

W. E. Lawrence, roentgenologist, then reported a case of congenital pyloric stenosis in a child three months of age; the child weighed 9 pounds at birth and first showed symptoms when one week old; it began vomiting part of its feedings which became progressively worse until within the last two weeks it seems almost all of its food has been vomited and its weight was six pounds a few days ago when coming under observation. Physical examination showed typical findings except that no pyloric tumor could be felt. Fluoroscopic study with barium showed that less than 50 per cent of the feeding had passed the pylorus in four hours and it also showed the dilation of the stomach accompanying the obstruction. Operation was advised as with a small percentage of the feeding having passed the pylorus in four hours, medical treatment should no longer be continued. However, following this barium meal the baby retained its feedings for the next two or three days much better than before and had gained one pound in weight and operation was refused by the parents. The second child of this family now eighteen months old began vomiting much of its food at three months of age when it weighed fifteen pounds; its weight never dropped below this point but remained the same until the child was seven months old when the symptoms rapidly disappeared and it is now a very robust child. The mother believed this improvement due to feeding solid foods. The parents and the first child are healthy and there are no indications of lues though with operation being refused mercurial in-

unctions are being tried for their effect, though it is not expected that the case now under observation can be so fortunate as to recover without operation. Strauss of Chicago considers these cases surgical when less than eighty per cent. of the barium feeding passes the pylorus in four hours.

Dr. F. Buckmaster then reported a case of epidemic encephalitis together with its discussion and differential diagnosis as follows: R. S., 17 years old, male, white. Nothing of importance in family or personal history, except that he has been subject to tonsillitis and throat disturbances from time to time but never had epidemic influenza.

Present trouble: About December 19, 1920, the patient developed a little sore throat and a feeling as of a "cold in the head." He felt quite weak, became quite nervous and was restless at night; about the 21st he first had diplopia which was well marked until he became bedfast on the 24th when he slept so profoundly for the next three or four days and nights that he was aroused with great difficulty. Headache was a prominent symptom during the prodromal stage of four or five days and fever developed during this time which reached 102.5 a few days after becoming bedfast but from that time on he had practically no fever. He had had muttering delirium one or two nights and suffered intense constipation though there had been no vomiting, urinary disturbances or mental disturbances, other than the delirium at night.

On January 1, 1921, he was moved from his home at Villa Grove, Ill., to St. Anthony's hospital in Effingham. For the two or three days before entering the hospital he had slept practically all of the time but less profoundly than before. When first examined at the hospital he was soundly asleep but was aroused and in a droll, expressionless, sleepy way gave some of his own personal history and said he had last remembered having had diplopia when he went to bed on December 24 but said that his vision was still blurred, and said that he still had severe headache and was weak.

Physical examination: A well developed muscular boy with a heavy head of hair, low forehead, rather large head and with some other stigmata of degeneration plainly evident. On being aroused he appeared intensely drowsy, with well marked ptosis of both upper eyelids, dilated but equal pupils which dilated further on exposure to light; he presented a very characteristic expressionless or mask-like face. He never talked except when questioned and quickly fell into a rather normal type of deep sleep when undisturbed.

Examination of the head showed no pain on percussion, no tender points, nose, ears and mouth negative but the throat was very red and the tonsils very large, red and full of deep crypts. There was no evidence of involvement of the cranial nerves at this time except the third pair. The neck shows considerable muscle rigidity and there are several quite large lymph

glands in the upper neck on each side. The thyroid is not enlarged.

The chest, heart, lungs, abdomen, and genitals were negative and the blood pressure was normal. The extremities were negative except that the patellar and plantar reflexes were excited and there was moderate ankle clonus on both sides. There was no Babinski, Oppenheim or Gordon reflexes but a limited Kernig was present but there was no tache cerebrale. There was moderate muscle rigidity along the spine also. Abdominal reflexes decreased. Muscle twitchings about the face and chest were observed when he was asleep; there was no special loss of muscle power in any part and no sensory disturbances were determined. There had been no neuritic pains and no intension tremors. There had been no delusions, hallucinations or other psychotic disturbances in his waking moments except depression and slow cerebration and there had been no epileptiform attacks.

Laboratory examinations showed normal urine, a total white blood count of 12,000, and a red count of 4 millions plus; polymorphonuclears 82 per cent. No growth from blood cultures; spinal puncture made on the day of entrance showed a slight increase of pressure and was two plus Wassermann positive, contained three cells to each cmm, was negative on culture and globulin negative but no Lange test was made.

Since entrance, January 1 to date, the 11th, the patient's headache had cleared up, his fever 100 on entrance disappeared and he has since had an afebrile course, he has slept less profoundly, he became easier to arouse, his mask-like expression and ptosis have improved very much but his reflexes remain the same except that on the 7th day after entrance he again lapsed into a deep sleep for two days and nights with return of the ptosis and mask expression; he then improved again as before. During the eleven days now in the hospital he has had two or three restless nights.

This case history conforms almost typically to the usual routine as observed in acute epidemic encephalitis; this disease in its present spread was observed and reported from Austria in 1917; from France and England in 1918, and first appeared in this country in 1919 continuing in a scattered sporadic way to date, recently becoming more plentiful again. To our physicians at this time in a practical way, it is really a new disease and the average physician's library probably contains no text-book description of it but a great many very able journal articles describing its various phases have appeared in the last two years to which reference should be had, as the family physician should be able to recognize these cases.

Briefly the clinical histories of these cases may be summed up as follows: Prodromal symptoms such as sore throat, fatigue, nervousness, restless nights, moderate fever, etc., occur in a great many cases and diplopia is almost a regular symptom preceding the lethargic stage but is usually of short duration; fever will usually reach 102 or 103 but usually declines to rather normal limits at the end of a week or ten

days as it did in this case. Another very nearly regular symptom is the lethargy, the sleep being more or less profound but strange to say largely of a normal type; the patient may be aroused easily or with difficulty for medicine and food, or he may deepen into coma which together with high fever is unfavorable.

Another very typical symptom is the mask or expressionless face appearance when aroused; the upper lids droop from third nerve involvement and the "Light of intelligence" seems entirely banished from the expression; thus they seem to sleep rather normally but appear the reverse on being aroused.

As meningeal symptoms, headache is quite regular, usually severe and beginning early but usually ceases rather early in the disease; also stiffness of the muscles of the neck and back regions, and perhaps of the limbs, a slight Kernig and occasionally tache cerebrale.

Cranial nerve involvement is regular, most frequently observed as lid ptosis and diplopia, pupil dilatation, etc., from involvement of the third, fourth and sixth nerves; diplopia is often the first typical symptom but the lid ptosis is the most constant of the cranial nerve symptoms, improving only when general improvement sets in. Involvement of the mesencephalic root of the 5th nerve often occurs causing neuralgic pains in the face; irritation of the motor root of the 5th causing masseter stiffness, etc., is not common. The 7th nerve is involved at times as I observed recently but the paralysis will be limited to the lower areas of distribution. Involvement of the 9th causes weakness or paralysis of the throat muscles and of the 10th is thought to cause tachycardia; the 11th may be involved affecting the sterno-mastoid and trapezius muscles; in fact the nerves of special sense are the only ones not involved or rarely so.

Motor tract and cord symptoms are shown as disturbed deep reflexes which is common, together with ankle clonus, Oppenheim, Gordon and rarely Babinski and sphincter loss. Polyneuritic symptoms consist of pain in the extremities, paresthesias and numbness, sensory losses, etc.

Cerebellar symptoms consist of catalepsy, vertigo, nystagmus, ataxia, etc., and cerebral and iter symptoms consist of insomnia, delirium, lethargy, coma, Jacksonian or other epileptiform seizures, motor aphasia, and the psychotic symptoms are delusions, hallucinations, depressions, active delirium, maniacal, etc., and polypnea may occur as a distressing medullary symptom.

Such then in general is the most usual symptomatology of these cases which points to an involvement of the basal ganglia and brain stem; this area is found congested, petechial hemorrhages, edema, inflammatory softening, with infiltration and exudation and the disease is likely to last for weeks and as sequelae, nystagmus, lid ptosis and other muscle weaknesses or paralyzes and psychiac disturbances have been known to follow apparent recovery otherwise.

Laboratory examinations usually show no important findings, the spinal fluid being negative except that about 50 per cent. of the cases are said to show the presence of globulin but the cell counts seldom ex-

ceed 8 or 10. The white blood count is usually about 10,000 or 12,000.

This disease then must be differentiated from a few other conditions, particularly from other forms of encephalitis; (a) polio-encephalitis may occur as the superior (ophthalmoplegic) type, or inferior (bulbar) type, the muscles of the indicated regions being involved in either instance, and if skeletal paralyses occur from involvement of the motor tracts, it will be of the upper neurone (spastic, or infantile cerebral) type. These cases though are usually met with only as a variant of the polio-myelitic group when the latter is more or less epidemic, producing the usual lower neurone (flaccid) type of infantile paralysis and do not pursue the usually long drawn out lethargic course of the epidemic type. (b) Diffuse syphilis of the brain is largely an involvement of the meninges involving the cranial nerves directly or usually by exudate and involving the vessels of the brain itself primarily, and secondarily the brain structure by infiltration, exudate and ischemic softening, producing headache which becomes progressively severe and continuous, insomnia and restlessness, and finally various cranial nerve involvements occur but none with the regularity observed in epidemic encephalitis; monoplegias or more extensive paralyses of the limbs may occur, together with emotional disturbances, loss of memory or other more important mental symptoms to the extent of well marked insanities, and vision is very likely to be badly disturbed and these cases do not present the typical lethargic state observed above. These cases pursue usually rather a lengthy course frequently requiring a few weeks to several months before becoming incapacitated and the spinal fluid will usually show an increased cell count as well as a positive Wassermann. Our case here showed a positive Wassermann spinal fluid, but his present illness cannot be regarded as a syphilitic syndrome. Gummata produce more particularly brain tumor symptoms according to the area involved, each of which must be considered individually.

The meningitides are to be differentiated from encephalitis which is not truly a meningitis and except for the headache does not produce marked meningitis symptoms. (a) Serous meningitis is associated with headache, spinal fluid under increased pressure, frequently loss of vision even to the point of blindness and is slow in its course. (b) Epidemic meningitis is usually acute, producing definite and well marked meningitis symptoms, the spinal fluid showing the meningococcus, increased cell count to the point of being cloudy and usually runs a brief severe course but there are atypical cases which pursue an indifferent course. Cranial nerve involvement is not regular, but real coma is frequent being relieved more likely by withdrawal of spinal fluid if under high pressure. (c) Tuberculous meningitis usually occurs in children or young adults as a secondary involvement with the irritative stage showing headache, restlessness, possibly vomiting or convulsions, some fever, etc., which gradually passes over into the paralytic

stage with coma, together with restlessness, grimaces, etc., cranial nerve involvement, especially the eye muscles, the case progressing to death in nearly all instances within ten days or two weeks. The spinal fluid may be negative early but later usually shows increased cell count and often, tubercle bacilli. (d) Suppurative meningitis is usually secondary to ear, sinus or local scalp or skull suppurations but may be metastatic in the true sense of the word; the headache is very severe, and continuous, leading to coma and death as a rule unless it can be relieved surgically. This and other forms of meningitis will betray themselves by spinal fluid examination and by their association with infectious diseases and by their course, as distinguished from epidemic encephalitis. Disturbed reflexes serve to exclude the hysterical neuroses.

MACOUPIN COUNTY

March Meeting

The Macoupin County Medical Society met in regular session in the New Commercial Club rooms and was called to order by President L. D. Rockefeller of Bunker Hill.

Sixteen members and visitors were present.

Dr. H. P. Beirne of Quincy, Councilor for the sixth District, gave a very interesting and instructive address on "The Physics and Uses of Radium." A thorough discussion of this subject was taken up by the members present.

The Censors reported Staunton as the place for the next regular meeting of the Society.

The following officers for the coming year were elected: president, Dr. D. A. Morgan, Nilwood; vice-president, Dr. M. Herschleder, Mt. Olive; secretary-treasurer, Dr. T. D. Doan, Scottville; delegate, Dr. T. D. Doan, Scottville; alternate delegate, Dr. G. E. Hill, Girard; medico legal advisor, Dr. J. P. Denby, Carlinville.

Moved and seconded that we thank Dr. H. P. Beirne of Quincy, for this interesting, instructive address on "The Physics and Uses of Radium," the physicians of Virden for their royal welcome and all others who have helped to make this meeting a success. Carried unanimously.

On motion the Society adjourned to meet at Staunton in May.

MADISON COUNTY

Our April Meeting

The Madison County Medical Society met in Alton, on April 1, 1921, with President Dr. E. F. Wahl, in the chair.

Forty-one members and five visitors were present.

Dr. L. G. Burroughs moved, seconded by Dr. Fred Wade Jones, that the chair appoint a committee of three to go to Springfield when called upon, to represent us in behalf of medical legislation and that the expense of such committee be paid by our society. Carried.

The Community Nurse read her report for March, which was ordered placed on file.

The committee appointed to investigate Dr. M. W. Harrison and the Harrison Colony brought in a report which was adopted and the whole matter referred to the Board of Censors.

The secretary reported having received a check for \$100 from the Madison County Chapter of the Red Cross, to be used for the local work of tuberculosis.

Dr. Bransford Lewis, of St. Louis, was then introduced and gave a most instructive address on "Some of the Essentials of Prostatic Obstruction." This lecture was illustrated with a profusion of stereopticon slides and was one of the very best ever presented to this body. A rising vote of thanks was tendered to the distinguished visitor.

On motion adjourned to meet in Edwardsville on the first Friday in May.

PIKE COUNTY

The Pike County Medical Society met in Pittsfield, April 28, 1921, with a good attendance. Dinner was served at 12:30 and the Society convened in the county court room at the courthouse. The Society, after reading and approving the minutes of the last convention, went on record as endorsing the efforts of Dr. John R. Neal in his efforts to keep high the standards of medical education and approving his methods of legislative activity. House bill No. 373 was unanimously opposed. Election of officers for 1921-22 resulted as follows: president, Dr. R. J. McConnell, Baylis; vice-president, Dr. W. F. Reynolds, Hull; secretary-treasurer, Dr. W. E. Shastid, Pittsfield; delegate to State society, Dr. S. B. Peacock, Pittsfield; alternate, Dr. T. D. Kaylor, Barry.

Dr. Chiasson of Rockport read a fine and suggestive paper on the subject of "Hospitalization for Pike County." This received a very thorough and exhaustive discussion from most of the members and one that will be heard from later.

A paper on "What We Know and What We do not Know About Pernicious Anemia," was then read. Dr. C. E. Beavers of Barry presenting the clinical side with scientific zeal and accuracy, as did also Dr. W. W. Kuntz of Barry for the laboratory side.

Dr. E. H. Bounds of the Marion County, (Mo.) Medical Society was a visitor and presented X-ray pictures, as well as ordinary photographic pictures of a monstrosity, which was delivered by him by Cæsarcan section with the mother living.

No one in the society had ever seen anything like this and even in medical literature but few such have been reported.

On motion and invitation of Dr. Kaylov, Barry was selected as the next place of meeting.

W. E. SHASTID, Secretary.

RANDOLPH COUNTY

Society met on lawn of Baptist church, Baldwin, May 18, 1921, with twelve members present and several visitors.

The ladies prepared and served a very excellent basket lunch under the shade of maple trees, which was much enjoyed.

A business meeting was held after lunch. Report of fee bill committee was quite thoroughly discussed and accepted. Each member present is to sign the adopted fee bill and have secretary send same to all members not present for their signatures, and when all had signed, to have 100 copies with signatures printed and copies sent each member to be placed in his office as a guide for himself and patients.

Annual election of officers resulted as follows: President J. W. Robertson; vice-president, Lloyd; secretary and treasurer, L. J. Smith; censors, same as last year, Stanley, Hoffman and Hendrickson. Dr. Wilson made a short talk regarding his boyhood days in Randolph county and his enjoyment in being in company with his friends on this beautiful day.

Expressions of thanks were tendered the ladies, and Drs. Lloyd and Ries for their excellent treatment. Also appreciated remarks were said of the secretary-treasurer for his past work, for which he is humbly grateful.

It was decided to hold next meeting at historic Ft. Chartres, in June, after which society adjourned.

J. W. Robertson, President.

L. J. Smith, Secretary-Treasurer.

Personals

Dr. Alfred Murray of Chicago has been appointed Rhinologist and Laryngologist to Augustana Hospital.

Dr. Walter B. Metcalf of Chicago discussed the importance of and best methods of making an early diagnosis of tuberculosis disease before the Physicians' Club of Elgin at the State Hospital, May 9.

Dr. Louis J. Smith, Percy, secretary of Randolph County Society, will read a paper on "Contusions, Abrasions and Lacerations—Their Treatment," at the meeting of the Association of Surgeons of Southern Railway, at Mobile, Ala., May 24-26.

News Notes

—The contract has been awarded for the construction of a \$175,000 hospital at Duquoin.

—Dr. Lillian Hobbs Seymour, who was sentenced to fourteen years in the penitentiary on a conviction of performing an operation which caused the death of Elda Christopherson in 1916, and was sent to Joliet in May, 1920, it is reported has again been granted a retrial.

—At a recent meeting held in Clinton, the DeWitt County Medical Society went on record by adopting a resolution which declared that component society disapproved the writing of prescriptions for beer and wine under the new interpretation of the Volstead act.

—The Knox County Medical Society, at its spring meeting in Galesburg, adopted resolutions condemning the writing of prescriptions for liquor. The fall meeting will be a tricounty affair at Galesburg with Henry, Warren and Knox counties represented.

—At the annual meeting of the Chicago Laryngological and Otological Society, May 2, the following officers were elected: President, Dr. Robert Sonnenschein; vice-president, Dr. Edwin McGinnis; secretary-treasurer, Dr. John A. Cavanaugh; members of the council, Drs. Otto T. Freer and Albert H. Andrews.

—Recent cases of ophthalmia neonatorum under the care of Chicago physicians, which have terminated in the loss of sight to the infants, have been called to the attention of the Illinois Society for the Prevention of Blindness. On investigation it was learned that in at least six cases the physicians failed to observe the requirements of the state law governing report of the physicians. The society therefore desires to call the attention of physicians to the Illinois law, in force since July 1, 1915, which requires a report within six hours of any inflammation in the eyes of an infant under two weeks, irrespective of the nature of the infection.

—The Illinois Tuberculosis Sanatorium Pilgrimage, conducted under the auspices of the Illinois Tuberculosis Association during the week from May 9 to May 14, proved to be a remarkable success and will go far toward the elevation of the standards of the many county sanatoria now being established throughout the state. The itinerary covered the following institutions: Monday, the Springfield Open Air Colony and the Homestead of the Palmer Tuberculosis Sanatorium at Springfield and the St. John's Sanatorium at Riverton; Tuesday, the McLean County Sanatorium at Bloomington; Wednesday, the LaSalle County Tuberculosis Sanatorium, the Ottawa Tuberculosis Colony and the Illinois Valley Hospital at Ottawa; Thursday, the Peoria Municipal Sanatorium at Peoria and the Tazewell County Tuberculosis Sanatorium at Macki-

naw; Friday, the McDonough County Sanatorium at Bushnell and the Adams County Sanatorium at Quincy and Saturday, the Morgan County Sanatorium at Jacksonville.

—The State Medical Society of Wisconsin will celebrate its seventy-fifth birthday by holding a "Home-Coming" meeting in Milwaukee, September 7, 8 and 9, 1921. All former Wisconsin men, whether they have practiced there or left Wisconsin to study medicine, practicing elsewhere after graduating, are invited to this home-coming. The officers of the society are anxious to secure at this time for mailing purposes the names of all former Wisconsin men. They will confer a favor by sending their names and addresses to Dr. Rock Sleyster, Secretary, Wauwatosa, Wis.

—The July issue of the *Medical Review of Reviews* will contain a lengthy original contribution by Mme. Curie entitled "The Radio Elements and Their Applications." It is, we believe, the first and only contribution which this noted scientist has made to an American publication and is extremely valuable. A copy of the July issue containing it will be sent gratis to any physician making the request.

Address the *Medical Review of Reviews*, 51 East 59th Street, New York.

—The Military Surgeon's Association of Illinois held its first annual meeting in Springfield, May 15, with election of the following officers: President, Col. Gustavus M. Blech, Chicago; vice-president, Major William McIlwain Thompson, Chicago; secretary, Captain Alfred De Roulet, Chicago; treasurer, Major J. McKinley. The executive committee is General S. C. Stanton, Commander David S. Hillis, Dr. Maximilian Kern, and Major S. M. Edison. Colonel Blech delivered an address on "Urology in the Army." Captain Aron described the functions of ambulance companies. Major Thompson gave an account of surgical work as carried on at the front during the World War. The new association will meet annually at the time and place of the meetings of the Illinois State Medical Society.

—Logan County Medical Society held a meeting in Lincoln, May 12, at which the following officers were elected: President, Dr. C. B. Caldwell; first vice-president, Dr. Forrest Van Hook of Mt. Pulaski; second vice-president, Dr. J. H. Butler of Lincoln; secretary-treasurer, Dr. E. C. Gaffney; delegates, Drs. F. M. Hagans and W.

W. Coleman. The society decided to close offices of the members every Thursday afternoon during June, July and August. Dr. E. C. Gaffney was reappointed city health officer by the mayor recently.

—Dr. A. Scott was fined \$25 and costs by Judge Lovett at Peoria for practicing medicine without a license last month.

—Dr. S. A. Warthin, professor of pathology in the University of Michigan, was the guest of honor at a banquet of Alumni of the university at the Leland hotel in Springfield, May 9.

—Boy Scouts during the recent drive for funds were active in public health work in many cities. In Waukegan they made a sanitary survey and seventy notices were served on householders as a result of the Scouts' reports. In Springfield they distributed circulars at the request of the health officials. In Chicago selected scouts occupied the official chairs of the mayor and other officials for one hour, hearing reports from their "subordinates" and issuing "orders."

—The U. S. Civil Service announces vacancies in the position of Roentgenologist of various grades. Applications can be made until August 1. Applications are also being received for the position of Reconstruction Aide.

Marriages

JOHN FISHER GAINER, JR., Palatine, Ill., to Miss Mildred Smith of Chicago, May 14.

WILLIAM N. GOONE to Miss Fae Eisenstein, both of Chicago, April 10.

Deaths

ALFRED N. BOE, Chicago; National Medical University, Chicago, 1903; aged 61; a member of the Illinois State Medical Society; also a druggist; died at the Swedish Covenant Hospital, April 17, from pyonephrosis.

HENRY N. DREWRY, Altamont, Ill.; Chicago Medical College, 1876; aged 73; died at the Alton (Ill.) State Hospital, April 10, from cerebral hemorrhage.

CORNELIUS S. ELDRIDGE, Chicago; Homeopathic Medical College of the State of New York, 1868; aged 79; a veteran of the Civil War; died, April 19.

MILES MINOR GLASS, East St. Louis, Ill.; Rush Medical College, 1886; aged 60; also a druggist; died, March 29, from cerebral hemorrhage.

THOMAS B. GOODMAN, Cobden, Ill.; University of Illinois, Chicago, 1884; died, May 1, from heart disease.

GEORGE UPTON MCCOMAS, New Canton, Ill. (license,

Illinois, 1888); a Fellow A. M. A.; aged 62; died, April 20.

EDWIN A. MCCORNACK, Elgin, Ill.; Bennett College of Eclectic Medicine and Surgery, Chicago, 1881; a Fellow A. M. A.; College of Physicians and Surgeons, Chicago, 1889; aged 66; died, April 14, from heart disease.

JOHN MCLEAN, Chicago; Rush Medical College, 1863; aged 83; a member of the Illinois State Medical Society; surgeon and medical adviser for the Pullman Car Company for forty years, and at one time local surgeon for the Illinois Central Railroad; a veteran of the Civil War; died in St. Mary's Hospital, Centralia, Ill., April 25.

MARTIN VAN BUREN MONTGOMERY, Opdyke, Ill. (license, Illinois, 1878); aged 83; died, April 8.

NEWTON B. MORSE, Wyoming, Ill. (license, years of practice, Illinois, 1878); aged 83; a member of the Illinois State Medical Society; died, April 27, from cerebral hemorrhage.

NIELS NICOLAI JOHN NIELSEN, Chicago; University of Illinois, Chicago, 1903; a Fellow A. M. A.; president Scandinavian-American Medical Society, 1918; a member of the staff of the Norwegian-American Hospital; died, May 14, from arteriosclerosis, aged 43.

DAVIS SCOTT RAY, Cuba, Ill.; College of Physicians and Surgeons, Keokuk, Iowa, 1892; a Fellow A. M. A.; aged 59; secretary of the Fulton County Medical Society, Fulton County Tuberculosis Association, and Fulton County Physicians' Association; at one time coroner of Fulton County; died, April 16, from heart disease.

STEPHEN THOMAS ROBINSON, Edwardsville, Ill.; Vanderbilt University, Nashville, Tenn., 1881; a member of the Illinois State Medical Society; at one time president and vice president of the Madison County Medical Society; died, May 4, from diabetes, aged 63.

EDWARD CONSTANT SEUFERT, Chicago; College of Physicians and Surgeons, Chicago, 1893; a Fellow A. M. A.; aged 57; professor of clinical medicine in the Chicago College of Medicine and Surgery; at one time physician at the American and Norwegian-American hospitals and pathologist to St. Mary's of Nazareth Hospital; died, April 27, from carcinoma of the stomach.

ALDEN E. SMITH, Freeport, Ill.; Chicago Homeopathic Medical College, 1884; aged 60; a member of the Illinois State Medical Society; president of the Illinois Homeopathic Medical Association in 1908; a veteran of the Spanish-American War; died, May 3.

JOHN FRANCIS SNYDER, Virginia, Ill. (license, Illinois, years of practice, 1901); died, April 30, aged 91.

EMZA E. WARD, Sesser, Ill.; Missouri Medical College, St. Louis, 1890; died about April 30 aged 57.

MACCLAREY WEEKS, Galesburg, Ill.; Northwestern University Medical School, Chicago, 1902; a Fellow A. M. A.; aged 49; at one time president of the Knox County Medical Society; died, suddenly, April 19.

GEORGE WOODEN, Crossville, Ill.; Kentucky School of Medicine, Louisville, 1889; aged 58; died in Oklahoma, recently.

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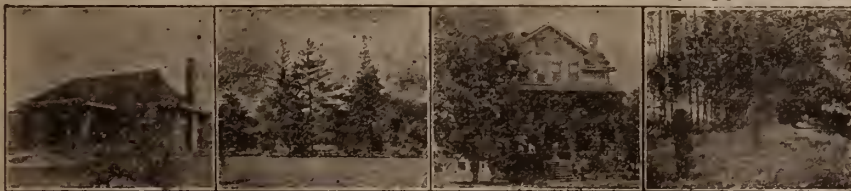
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